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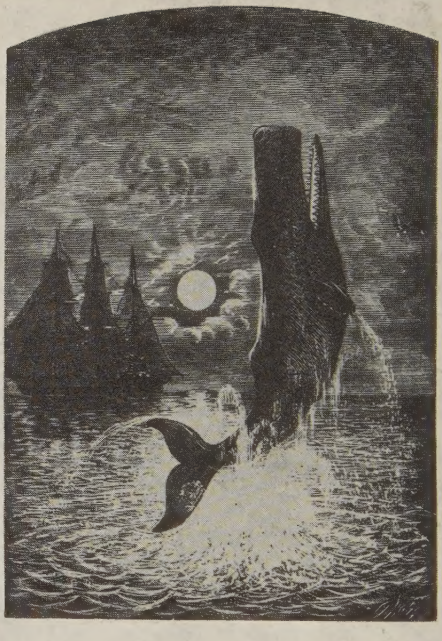

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ROUTLEDGE'S

EVERY BOY'S ANNUAL.

AN ENTERTAINING

Miscellany of Original Literature.

EDITED BY EDMUND ROUTLEDGE.

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CONTENTS.

PAGE

STEPHEN SCUDAMORE THE YOUNGER; OR, THE FIFTEEN-YEAR-OLDS. By Arthur Locker. 1, 65, 166, 237, 262, 330, 390, 449, 550, 577, 644

KNOTS AND THEIR USES. 19, 367

FAR AWAY IN THE FROZEN SEAS; OR, A STORY OF A WHALING EXPEDITION. 26, 88, 153, 217, 294, 357, 425

HUNTING. By Sidney Daryl. 33

THE NOHAK-BURNER. By James Greenwood. . . 39, 109, 177, 201

TRADES CONNECTED WITH SCIENCE AND ART. By Thomas Archer. . . . 50, 97, 144, 193, 304, 321, 417, 479, 533, 608

PUZZLES. 59, 125, 188, 254, 317, 381, 445, 510

KEY TO PUZZLES. 124, 187, 253, 293, 329, 448, 512, 576

ON THE EDITING OF A BOY'S MAGAZINE. 83

SLIDING. 121

THE GAME OF GOLF. 129

THE PAPER CHASE; OR, HARE AND HOUNDS. 140

HOW TO MAKE A MODEL STEAMBOAT. 162

A BRITISH BOY. 176

HOW TO BUILD A CHEAP ROWING-BOAT. 225

CAUGHT BY THE TIDE: A BIRD-NESTING ADVENTURE. . . . 228

A HORRIBLE SELL. 247

THE GENIUS OF SHAKSPEARE. 252

YACHTING. MY FIRST CRUISE IN THE "GYPSY." 257

PAGE

VELOCIPEDES. 284, 373, 409, 472, 543

THE TRUE AND WONDERFUL HISTORY OF THE DOG DANDY. By his own Master. 289, 350, 439, 492

ON THE SOLUTION OF CRYPTOGRAPHS. 301

WITH A COLOUR-BOX. By the Author of "Our Living Painters." 353

AT THE SEA-SIDE. 385

A ROWING MATCH. 442

"TACKLING A TIGER." 466

THE LETTER OF MARQUE. By Lieutenant C. R. Low, (*late*) I. N. 496, 518, 617, 682

BOWLS AND BOWLING. 513

THE ART OF MAKING FIREWORKS. By Charles W. Quin. 525, 629

FISHING FOR CATS. 625

MY FIRST APPEARANCE IN PRINT. 637

JOAN OF ARC. 641

ESSAY ON FOOTBALL. 676

"Bruno started off like lightning, dragging with him the sluggish ass."

To face page 1.

STEPHEN SCUDAMORE THE YOUNGER;

OR,

The Fifteen-Year-Olds.

A STORY OF BOYS' ADVENTURES AT HOME, ON BOARD A PASSENGER SHIP, AND ON THE AUSTRALIAN GOLD-FIELDS.

By ARTHUR LOCKER.

Part I.

My Father and Mother.—Nancy's Superstition concerning a Drop of Water.—The Blackberry Excursion to Halket Wood.—The Tall Young Gipsy.—His Roguery.—He is outwitted by Bruno the Pony.—We are lost in the Wood.—The Poachers.—We are taken Prisoners, and locked up in a Barn.—A Pair of Fiery Eyes.—Our Escape.—Sir Jocelyn Trafford.—His Hospitality.—My Father advertises for us.—Bruno comes Home with a Companion.

IF you had seen my father seated in his study, surrounded by piles of manuscripts and heaps of books, with my mother by his side, patiently copying the extracts which he read aloud to her, you would have said that you never saw a more studious couple. He was by profession an author, but not the sort of author that boys care about. Except on one occasion, which I will mention hereafter, he never wrote any exciting stories about shipwrecks, and battles, and haunted castles, and pirates' lairs, and bandits' caverns. His compositions appeared to me very dull and dry, for they were all about old coins, and old buildings, and old bones. We passed rather a retired life. Although we did not live far from London, my father seldom went to town, except for the sake of consulting some rare volume at the British Museum, and his chief relaxation consisted in striding swiftly up and down the gravel walk under the apple-trees, or in wet weather up and down the long passage which led from the kitchen

to the parlour, puffing clouds of smoke from a German pipe. As for my mother, with all the cares of the household on her shoulders (for beyond his books my father was as simple as a baby), she had little time to stir abroad.

My father, although a man of great learning, was too modest and retiring to make much money by his pen; still we managed to pass a happy contented existence. We lived on very plain food; we did not taste meat above thrice in the week, and we drank nothing but milk-and-water, for my father declared that most of our diseases arise from high feeding and stimulating liquors. The money thus saved from our dinners was spent in keeping a pony, and as this pony, although only thirteen hands high, indulged in every trick of which that noble animal the horse is capable—being addicted, as the humour took him, to rearing, jibbing, bucking, and shying—my sister Lucy and I decided that, when we had achieved the feat of riding Master Bruno barebacked, we had mastered the whole art of horsemanship.

My parents had not always been so stay-at-home as they were when I first made their acquaintance. My father was bred as a surgeon, and had in that capacity made several voyages to America and the East Indies. My mother was the daughter of an Indian officer, and had in her youth been shifted about from station to station. At Bombay my father fell in love with her, and as the major would not allow his daughter to marry a poor ship's surgeon, the poor ship's surgeon married her without asking the major's leave, and carried her off on board ship. I have since heard my uncle declare that my father had very little voice in the matter, and that it was my mother who ran away with him.

All these exciting adventures happened long before my time, and when I first knew my father he was a hard-toiling author, who looked too quiet to run away with anybody.

When I think of the superstitious tales our maid Nancy used to tell me about drowning, I wonder how I could be so eager as I was in those days to become a sailor. Here is one of her stories. Her brother was sitting one day on a gate, kicking his heels and thinking of nothing. Overhead was a bright blue sky, without a cloud in it. Suddenly he felt a drop of water fall on his forehead. From that moment he knew that he was doomed to be drowned. He was a sailor by trade, but his parents entreated him to give up going to sea. He did so, but with much unwillingness, for he had just been appointed second mate. A year afterwards, in trying to get a child's toy-boat out of a horsepond, he overbalanced himself, fell in, and was drowned. Another man whom Nancy knew, to whom this same fatal token had happened,

determined that he would never go near any piece of water big enough to drown him: he would not even cross a bridge. Nevertheless, said Nancy, triumphantly, Fate was too strong for him. He was seized with a fit while washing his hands, and was found drowned with his face in the basin of water.

You may fancy, then, how frightened I was when, one brilliant sunshiny day, as I was sitting under a hedge at the bottom of the garden, several drops of water fell on my forehead. I could not be mistaken, so I ran into the kitchen, and told Nancy. She, good-natured girl, folded me in her arms, and began to shed tears. Soon after I found that my fears were without foundation. My mischievous elder brother Alfred had hidden himself behind the hedge, and had squirted at me. Alfred only wanted to terrify me, for he was a great bully, but unintentionally he did me good. His pewter squirt cured me of my belief in a silly superstition.

I must now relate an adventure of my childish days. Some ten miles from our village there rose a line of wooded hills, and my sister and I were always wondering what sort of a region it was that lay beyond those hills. We fancied that it would be quite different from our native place. The ends of the rainbows rested on those hills as they never rested in our own village, and we indulged a faint hope that, if ever we got there, we should find the sky and grass of a strange colour—the grass perhaps crimson, and the sky emerald green. Perhaps dwarfs and giants dwelt among those mysterious hills; perhaps, instead of rooks or hawks, mighty dragons—scaly, glittering, man-eating monsters—went careering through the air.

We were too shamefaced to consult our friend Dick, the cowboy, though he had once penetrated, in search of a stray heifer, to the verge of the Delectable Mountains, as we chose to call them; but he informed us that there were a rare lot of blackberries in Halket Wood, which lay on the slope of these wished-for hills. These words were enough. The blackberry season had begun, and we resolved to make an excursion to Halket Wood. At this time Lucy was eight, and I was nine years of age, and as half the charm of this expedition consisted in its secrecy, not a soul except ourselves was to know anything about it. Immediately after breakfast, while my mother and Nancy were standing at the side door talking to the butcher, I slipped into the pantry, took half a cottage loaf out of the bread-pan (my mother allowed us to help ourselves sometimes in this free-and-easy way), cut a good-sized piece of Dutch cheese, filled a bottle with milk, and selected six of the largest potatoes which I could find in the sack. I did not forget my pocket-knife, a box of

lucifer-matches, an old newspaper for kindling a fire in case the sticks should be damp, and a bag of oats for Bruno's dinner, while Lucy contributed five rosy-cheeked apples that had just fallen from the tree, three lumps of loaf-sugar by way of a little confection after dinner, and a pair of scissors, needles, and thread, in case of any tailoring work being needed. These articles we fastened, in two equal parcels, on either side of Bruno's saddle. We then led him quietly down the shrubbery into the back lane, where we mounted him.

Everything promised favourably: nobody noticed our departure, and Bruno, instead of going through a series of his usual gymnastic performances (for he generally began by standing on his hind legs like a dancing bear, and ended by rolling over and over in the dust like a newly-washed Newfoundland dog)—instead of all this, he trotted off in a most business-like manner, as if determined, for once in his life, to do all he could to please us. The weather was lovely—a warm sun with a cool breeze—and our hearts beat with the most eager anticipation of the pleasures in which we were about to revel. For a long time we met with no adventures, except that when we passed a labourer's cottage the children would point at us and run after us, for it is not every day that you see two such little people riding double; and my sister's bonnet was on the back of her head, and her yellow hair was all streaming in the wind, as she sat with her arm tightly clasped round my waist. But when we had ridden for nearly two hours, and when Bruno was beginning to toss his head as a hint that he would like to stop, and taste some of the grass that grew at the roadside, just then, at a bend of the lane along which we were travelling, we came up with a tall thin young man, wearing a pair of frayed knee-breeches and a flowered waistcoat, from the arm-holes of which projected a pair of dingy shirt-sleeves, for he had no coat on his back. He was riding, in a dexterous unconcerned manner, on the extreme hinder part of a donkey, and guided his steed by the sole aid of a stout ash cudgel. This young man had a keen, sharp-featured face, a pair of brilliant black eyes, and a swarthy complexion. He did not laugh at us, as other people had laughed; his face was perfectly grave, and he touched his ragged fur cap in a respectful manner, saying, as he did so—

"A fine day for a ride, my noble captain and my noble lady."

From the manner of his speech it was evident that we had entered into a new world. Nobody had hitherto accosted us so courteously. I reined in our palfrey ("palfrey" sounds more romantic than "pony"), for the purpose of acknowledging the young man's salutation in a becoming manner, and then, while Bruno was busily engaged in making

a hearty luncheon from the dainty grasses under the hedge, I inquired how far it might be to Halket Wood.

"You're at the beginning of Halket Wood now, captain."

"Are there any blackberries there, sir?" asked my sister, blushing.

"Blackberries, my noble lady! I believe yer. As big," said the young man, forming his hands into a circle, "as big as—as little apples, and as sweet as sugar-candy. But they ain't in this part of the wood."

"Where, then?" I asked.

"A bit further in. D'ye see that gap in the hedge, captain?"

"Yes."

"Go through that gap for half a mile or so, and you'll come to where there's thousands—ay, millions. Shall I show you the way?"

"I should think you so kind if you would," cried Lucy.

At these words the young man bestowed a tremendous thwack on his donkey's leathern sides, shouted "Gee hup, Neddy," and then led the way into the wood. Bruno followed, but in a very perverse temper. He was angry because he had been disturbed in his luncheon, and he revenged himself on us, by pretending to be excessively nervous, shying at all sorts of objects, and taking an especial dislike to trees, which, in the middle of a wood, was rather an inconvenient prejudice. At length, by means of a remarkably sudden and violent "shy," ingeniously complicated with a sort of circular "buck," he managed to unseat both his riders. I flew right over his head, and escaped without the slightest injury. Poor Lucy was thrown into a furze-bush, and received several scratches which brought the tears into her eyes, though she bore the pain manfully. As for that rascal Bruno, he was so delighted with the mischief he had done that he stood for several seconds stock still, with a cunning look in his eyes, as much as to say, "Now, then, Brother Stephen, catch me if you can." But the dexterous young man was too quick for him. He urged Neddy into a canter, and before Bruno knew what he meant to be at, had cleverly caught the reins on the end of his cudgel. He then gathered the reins together in his hand, and, raising his formidable stick, administered such a dressing to our naughty self-willed brother as he had never received in all his life before; "whack—whack—whack," went the stick: Bruno kicked, and plunged, and reared; the donkey and he spun round in a circle; still the young man kept his seat and banged away without moving a muscle of his countenance. But I could not bear to see Bruno, whom we regarded as a blood relation, treated so cruelly. The tears came into my eyes, and I stammered out—

"Please, sir, don't beat poor Bruno any more."

"I won't," returned the young man, lowering his stick. "I've given him a lesson—such a lesson as he won't forget in a hurry. Ah! would yer?" he exclaimed, as Bruno made one last faint attempt at resistance. "He was a good pony to begin with, but he's worth ten pound more now than he was when he came into this here wood. A babby will be able to ride him after this. I hope my noble lady hasn't hurt herself?" continued the young man politely, as he turned towards Lucy.

"The prickles have hurt me," answered Lucy, as she dried her eyes. "But I don't mind them now. How far is it, sir, to the blackberries?"

"Not many minutes' walk," said the young man. "It's rayther a scrubby place; there's thorns and such-like as high as my head; so we'd best tie the pony and the donkey up here, and travel on foot."

I agreed to this reasonable proposition. While we were securing the animals, the young man examined our saddle-bags with some curiosity. "May I take the liberty, my noble captain," he said respectfully, "of hasking what you've got in these here bags?"

"Oh! all sorts of nice things," exclaimed Lucy eagerly. "There's bread and cheese, and potatoes, which Steve and I are going to roast, and there's some apples out of our own garden—please take one, sir—and there are some beautiful lumps of sugar."

"And this," said I, determined not to let Lucy have all the talk to herself, "is my new knife with a corkscrew and a gimlet in it, which uncle gave me on my last birthday, and this is Bruno's dinner," pointing to the oats.

The young man muttered something which sounded like "Pore little innocents!" but I did not understand what he meant by it at the time, nor did I understand why he advised that the oats and the pocket-knife should be left suspended to Bruno's saddle, while the rest of the provisions were to be carried with us on foot.

I bestowed a farewell pat on Bruno's plump shoulder, and Lucy very forgivingly put her arms round his neck, and kissed his black nose. We then followed the young man through the underwood, which every moment grew denser and denser, so that in a few minutes both Bruno and Neddy were hidden from our view. Suddenly the young man stopped, and felt carefully in all his pockets. "Lawk!" he observed, "what a stoopid I am! I've been and dropped my bacca-pouch alongside of my donkey. Wait here, my noble captain and my noble lady, while I fetch it."

"You'll come back, sir?" asked Lucy anxiously.

"Come back? Ay, in half a jiffy." With these words the young man strode swiftly away.

"Oh! Stephen," exclaimed Lucy, "what a lovely lizard!"

Both of us instantly gave chase to the lithe and elegant golden-brown creature, as it darted swiftly across the greensward. We pursued it for some distance, till it disappeared in a furze-bush. I spent a minute or two in vainly trying to dig it out with a piece of stick, as I had left my pocket-knife behind.

"Stephen! I hear the sound of horses' feet!" cried Lucy. "Let us climb to the top of this hillock, and see who it can be."

Both Lucy and I had been oppressed all the morning with a consciousness that we might possibly be pursued, and as soon as my sister spoke, my guilty imagination summoned up a picture of my father tearing along on top of the butcher's raw-boned white horse. But as soon as we had mounted the hillock, which was high enough to command a tolerably extensive prospect, an entirely different scene met our astonished eyes. We saw our polite friend the tall young man, after having carefully tied Bruno and Neddy together, vault nimbly on the back of the former. He then administered a smart blow with his cudgel and rode coolly away, thus carrying off both animals at once. Presently they disappeared among the thick underwood.

"He has taken away Bruno!" whispered Lucy, her great blue eyes filling with tears, as she convulsively clasped my hand. "Oh, Stephen, what are we to do?"

This was a question more easily asked than answered, so that I remained silent, straining my eyes in hopes of obtaining one farewell glimpse of our departing favourite. A few moments later the whole cavalcade emerged into view on a rising piece of ground. Bruno seemed to be journeying onwards in the most contented manner—I hated him for being so accommodating—but Neddy was trying to hold back, and was in consequence receiving a shower of merciless blows from his master. Little, however, did we understand the depth of hypocrisy which lurked in the bosom of our four-footed brother. Just as his new master was leaning over from the saddle for the purpose of belabouring his long-eared slave more effectually, Bruno sprang into the air as if he were a Pegasus on his way to the Elysian Fields; at the same moment he ducked his head between his forelegs, and twisted his body as cleverly as if he had been a fish. I don't think any horseman could have kept his seat under such an ingeniously complicated buck-jump. The tall young man flew up in the air, all legs and wings, like a heron, while Bruno started off like lightning, dragging with him the sluggish ass, *bon gré, mal gré, nolens, volens*, whether he willed it or no. Presently we saw the thievish young man (our eyes were now opened to his villainy)

rise slowly to his feet, with a doleful look on his face, and go limping after them. He had evidently no chance of catching them.

"Oh! don't I love Bruno!" whispered Lucy, smiling a triumphant smile in the midst of her tears and terror.

As for myself, I longed to clap my hands for joy at the young man's defeat, but was afraid to do so for fear that in his wrath and disappointment he should come back and murder us. In any case I felt pretty certain that as soon as he gave up the pony for lost he would come back, and look for the pony's owners; so I said to my sister—

"Quick, Lucy, let us get away from here, and hide ourselves deeper in the wood."

We felt rather lonely and dispirited, as we carefully gathered up our provisions, and wandered along together, hand in hand, treading as lightly as possible, lest our footsteps should leave any traces behind them. We were in mortal terror of the tall young man; for we did not then understand that, though a thief and a vagabond, he had some sparks of humanity in his breast, as was evinced by his stealing the pony, the bag of oats, and the pocket-knife, but purposely leaving behind for our benefit our precious little stock of provisions, lest we should be starved in the wood.

It was now past mid-day; the heat of the sun became very oppressive, and the thickness of the undergrowth prevented the breeze from reaching us. Lucy grew pale, and began to drag her feet wearily along.

"I'm so hungry," she said. "Let us sit down and have dinner."

So we sat down, and made a hearty meal on bread, cheese, and milk. We looked anxiously round for blackberries, in order that we might be able to spare the rest of our provisions, but none were to be seen; so we made a frugal dessert on a single apple, taking alternate bites from it, and two lumps of sugar. Lucy then laid down her head on a soft mossy bank, and in two minutes was fast asleep. I could not go to sleep so easily. I was the commander-in-chief of the expedition, responsible for its success. We had already suffered a severe loss; our cavalry and part of our provender had been captured by a treacherous enemy; and if I did not bring my troops safely home (meaning myself and Lucy), what would mamma say? Besides, my mind was agitated by another important consideration. We had six raw potatoes in our possession, which must be cooked before they could be eaten. Should they be cooked now, or kept for a future emergency? for I regarded our return home as an affair which was not likely to be managed in less than a couple of days. There was something to be

said on both sides. If the potatoes were cooked now, they would not taste as nice as if they were cooked just before being eaten. But, on the other hand, that bloodthirsty young man, who, I felt sure, was scouring the woods in order to discover us, would be less likely to see the fire during broad daylight than if I put off lighting it till after dark.

At one moment I had some idea of making my fire with charcoal, as Robinson Crusoe did, for a similar reason; but then I remembered that I must first manufacture my charcoal, and that I could not prepare it without causing smoke. At length I decided that I would take time by the forelock, roast my potatoes at once, and that Lucy would be refreshed and ready to start by the time they were cooked. So I lighted my fire; but as the sticks which I had gathered were damp, they only smouldered, producing a suffocating smoke, which blew into my little sister's face, and woke her up. She started from her mossy pillow in a state of great alarm, crying out, "Mamma! mamma! the bedcurtains are on fire!" nor were her fears much appeased when she perceived how late it was growing.

"Steve," she said, "we must begin walking at once, or we shall never get home to-night."

As I had already made up my mind for a bivouac, I gave her no answer.

"Steve," continued Lucy, looking me wistfully in the face, "don't you think dear old Bruno will come back to fetch us?"

"I think he would if he could, Lucy," I replied; "but then, you see, he is tied to that horrid old donkey."

At these words Lucy shed tears. We then carefully gathered up the fragments of our provisions, and trotted away, as we believed, in the direction of the lane from which we had first entered the wood. We walked for a long time; Lucy began to get very tired, and complained of thirst. There was still half a cupful of milk in the bottle, some of which I wished to keep; but her thirst got the better of her powers of self-restraint, and she drank it all. I felt very thirsty too; but I thought I had better say nothing about it, so I followed the advice which I had once heard my father give, and putting a round pebble into my mouth, sucked it vigorously.

Once more, after a short rest, from which we were both very loth to rise, we again started on our journey. Suddenly Lucy cried joyfully, "Blackberries!" At this word I lifted my eyes, which until now I had kept steadily fixed on the path before me, and perceived that there were plenty of blackberries on all sides. In spite of his roguery in

the matter of Bruno, the tall young man had not altogether deceived us. There was an abundance of blackberries, and they were not like the little hard, dusty wooden things which we were accustomed to gather in the hedges near our own home; they were big, juicy, and perfectly ripe. In five minutes we had forgotten all our calamities. We did not trouble ourselves with the loss of Bruno, or where we should sleep that night; we did not even remember that that dark-complexioned young man might suddenly leap out upon us and overcome us: we only thought of blackberries, and we did not cease from feasting till our fingers and lips were stained purple. Then Lucy quietly laid herself down on the grass, and dozed off to sleep. I am sorry to say that, though commander-in-chief of the expedition, I followed her example on this occasion, being quite tired out. I cannot tell how long we slept. When I awoke it was quite dark; my legs were numb and stiff, and Lucy was moaning fretfully, "Mamma, please tuck me in; I'm so cold."

As it seemed now pretty evident that we must stay where we were until daylight, I determined to light a fire—a jolly, big, roaring fire, without minding what the dark-complexioned young man, or anybody else, might say to it. But just then I heard a voice which made my blood run cold—a terribly hoarse, harsh voice, which nevertheless spoke in a rough, guilty whisper, as if it were ashamed of itself. It said, "Come, Bill, don't be all night with them snares." Another voice, if anything still rougher and ruder, growled out some reply which I could not catch; and then two great burly figures, which loomed in the darkness, like giants, tramped past me. I partly believed that they were giants—man-eating giants, perhaps—and that they were setting snares to catch such helpless creatures as Lucy and me. Now, in all the story-books giants are represented as possessing a keen sense of smell, and I momentarily expected to hear one of them say, "Faw, fee, fo, fum! I smell the blood of Stephen and Lucy Scudamore." Happily they did not smell me out, but one of them trod on my foot as he passed. I did not cry out; I don't think I should have cried if he had crushed it, I was so frightened. I was very thankful that Lucy still slept, though she moaned and turned uneasily in her sleep; for the sight of these monstrous figures, and the sound of their harsh voices, would have startled her out of her senses.

As soon as the last faint echo of their footsteps had died away, I stooped and kissed Lucy to give her courage, and make her think it was mother; then I took her in my arms, for she was shivering with cold, and bade her wake up, for that we must start afresh upon our journey.

"I don't want to walk any more," she said peevishly; "I want to stay in bed; but Nancy's taken away all my clothes; and oh!" she added, while her teeth chattered, "I'm so cold!"

At last I got her on her feet, and then, with tremulous, uncertain steps, we began to grope our way through the darkness, still clinging prudently to the remains of our provisions. Suddenly, as we turned a corner among some very thick bushes, I heard the sound of whispering voices. The next moment a bright, dazzling, bewildering light flashed in my face, a hand seized me roughly by the collar, and a voice said—

"Hollo! what are you doing here?"

"Some of the poachers' young 'uns, I reckon," observed another man. "See here, she's carrying snares."

He made a snatch at Lucy's bag, and out rolled our half-dozen potatoes.

"'Taters, eh? with a brace of birds for a relish, I suppose," said the second speaker. "Now, then, young shaver, tell us who ye be, and what you're doing here at this time of night."

"Please, sir," I answered, "let me first gather up my provisions. They are all we have to depend on till we get out of this terrible wood."

"Provisions, eh?" said the first man. "What a rum little cove it is! I say, Tom, he looks like a young genelman."

"Don't you be too cocksure, Sam Watkins. Here's a box of matches on him; now, that don't look over-respectable at this time of night. D'ye forget the tramp we found under the hay-rick? You take and lock 'em up in the barn till daylight. Sarch 'em strictly fust, to see they've got no loose matches in their pockets, and jine me again as quick as you can up at the Long Copse; for I don't care to tackle these thundering scoundrels single-handed."

Mr. Watkins was a much pleasanter-spoken man than his comrade, Tom Hawkes. As soon as the latter had departed, he turned his dark lantern upon Lucy's face, muttering to himself—

"Pooty little girl! Gone off to sleep, I do declare. She must be dead beat. I'll carry her, and you run alongside of me, young master."

Before we reached the barn, Mr. Watkins had drawn from me the whole of our eventful history. He laughed heartily over the story of Bruno and the dark-complexioned young man.

"That was a gipsy, young master," he said—"one of the Romany people, as they call themselves. I knows him well. He pretends to get his living by making birch-brooms and washerwomen's clothes-pegs; but he's fonder of taking a hen from the roost, or a piece of linen

from the hedge, than of doing a stroke of honest work. Now, if I could have my own way, I should take you two children, especially this pooty little girl, down to my cottage. I should rouse my old woman out of bed, make her light the fire, and give you a good supper and a warm bed; but I'm only second in command here, d'ye see. Orders must be obeyed, or Tom Hawkes will be ready to wring my neck; so I must e'en lock ye up in the barn. But it's nice and warm; there's plenty of clean straw; and I'll come back and see ye as soon as ever I can."

Seeing that Mr. Watkins was so good-natured, I ventured to ask him one question before he departed on his errand. I asked it in a tone of breathless eagerness.

"Are there any giants here?"

"Giants? There was one in the show at fair time."

"But are there any in the wood?"

"In the wood? What d'ye mean?"

"Two monstrous figures passed close by us," said I, in a whisper, for I did not want Lucy to hear me. "They were talking of the snares they meant to set."

"Eh! were they?" exclaimed Mr. Watkins, sharply; "I wish you'd told me this before, young chap. I must be off like a shot. Good night." And he departed hurriedly, banging and double-locking the barn-door after him.

In some respects the barn was preferable to Halket Wood, for it was warm and dry, and contained plenty of bed-clothing, in the shape of hay and straw. But in the wood we were free to go where we pleased; and now we were prisoners, locked and bolted in, and I trembled to think what our fate might be in the morning. Mr. Watkins was evidently a kind-hearted man, but he was only Mr. Hawkes's lieutenant, and even if Mr. Hawkes were moved by our entreaties, was there not a stony-hearted baronet—Sir Jocelyn Trafford by name—to whom Mr. Watkins had darkly alluded, who was the lord of Halket Wood, and much of the surrounding territory, and who, being a justice of the peace, would, as soon as he had finished his breakfast, in all probability, summon us before him, and sentence us to imprisonment in two solitary cells, where we should be left alone in the damp darkness, in company with a porringer of water, a brown loaf, half a dozen horribly tame toads, and an army of inquisitive rats.

The barn was oppressively dark, except at the upper end, near the roof, where a ray of moonlight streamed in through a loft-door, which had been imperfectly fastened, and shed a faint illumination over the

floor of the loft. Lucy and I at first sat cowering in the thick darkness of that part of the barn where Mr. Watkins had left us, unable even to discern each other's faces; but as soon as we had recovered our first feelings of surprise, we crept instinctively towards the light. I made Lucy as comfortable a bed as I could among the trusses of hay, and then began to look about me to discover some means of escape. When my eyes had become gradually accustomed to the dim light, I perceived objects which had before been entirely invisible. I now saw that there was a ladder, placed almost perpendicularly, which led up to the loft floor, and that, if once there, nothing would be easier than to open the loft door, which stood ajar, and jump down. It was true that the jump would be about twelve feet in depth, but then there was generally a dung-heap underneath a loft, and if so, I would jump on to it. But how about Lucy? I fancied she would not dare to jump so far, and I could not leave her alone in the barn.

Reflecting over all these difficulties, I climbed the ladder. Just as my head had come upon a level with the loft-floor I heard a slight noise, which made me pause. The noise was made by an enormous rat, nearly as big as a young rabbit. He was stealthily crossing the loft-floor with an ear of new corn in his mouth, and, as he came into the narrow ray of moonlight, he was so close to me that I could see his great whiskers and his cunning bright eyes. Just then I chanced to look upwards, and saw something that made me forget all about the rat. A monstrous pair of round fiery eyes were glaring at me. I had seen our pussy-cat's eyes shining in the coal-cellar, but these were no cat's eyes. I was just wondering whether they could be the eyes of one of the scaly dragons of which I had read, when in a moment I heard a terrible whirr of wings, and the eyes seemed to rush at me. I threw myself backwards off the ladder, and fortunately fell into a truss of hay. I found my sister broad awake, staring up into the loft. When she had made sure that I had broken no bones, and was none the worse for my tumble, she asked me what made me fall down.

"I threw myself down," I answered, "to escape the dragon."

"It didn't look like a dragon," answered Lucy gravely. "It looked like a bird with a pussy-cat's face, and it ate up a great mouse."

Here a light broke in upon me. "Oh, Lucy," I said, "what a silly I've been! It was only an old owl. I shall go up again. But what's this on the ground? It feels like a snake."

"It was something that came down with you, Steve, when you fell."

I carried it cautiously up the ladder in order that I might examine it

in the moonlight. It was a fine stout piece of cord, some twelve or fourteen feet long.

"Lucy," I cried triumphantly, "we can escape! I have found a rope."

I saw nothing of my friend the owl this time. I suspect he had got into some snug cranny among the rafters, and was there picking the bones of that unlucky gentleman in a brown coat and long whiskers, whose mouth I had seen filled with stolen property. I pushed open the loft-door. The moon was not shining so brightly as before, for she was near upon setting, but the day was beginning to dawn in the east. Nothing could be more conveniently arranged for an escape. Underneath the loft door was a large heap of straw, which had been recently used for horses' bedding, and so clean that the daintiest lady would not mind jumping into it. I found an iron staple in the wall of the barn, to which I determined to fix my cord, and I then made knots at intervals of eighteen inches, to prevent the climber from slipping. My hands were neither very big nor very strong in those days, and I found the knot-making painful and difficult work, but I feared, if I did not make them, that Lucy, who, though active and nimble enough, was less used to climbing than I was, would never be able to come down.

At last my task was completed. I summoned Lucy into the loft, and we tugged at the staple with our united strength to make sure that it would hold. Then I began to descend, Lucy looking on from above with an anxious face. The cord waggled about a good deal, and I felt rather nervous, but I presently reached the ground, or rather the straw-heap, safely. Lucy came down in famous style, no boy could have come down better; but she certainly had this advantage over me, that I steadied the lower end of the rope for her.

But, now that we had got safely down, what were we to do next? There we were in the grey dawn of early morning, in the stable yard of a great big house, whose red brick walls we could see peeping through the leaves of the elm-trees. The sparrows in the eaves were just beginning to twitter feebly; two or three cocks were crowing lustily in chorus; a solitary duck, determined to earn her breakfast before her neighbours, was waddling along the gutters, diligently searching for worms; but all the human beings of the mansion were still apparently buried in sleep. Lucy and I felt inclined to yawn and shiver when we came out into the cold twilight, but as we had no time to lose, if we wished to make our escape unobserved, we joined hands, and, quickly crossing the stable-yard, opened a gate which led into the back premises of the great house. On perceiving where we had got to, we were on the point of turning

back, when Lucy's attention was attracted by the sight of a half-open window, in which great bowls of cream and milk were visible. It was the window of the dairy. We could not resist feasting our eyes on so luscious a sight, so we drew near and peeped in at the window. I could easily have put in my hand, and dipped it into one of the cream-bowls, but a great snow-white tom-cat lay curled up in the window, and, though he gazed at us with a pair of lazy good-humoured eyes, I did not feel sure that he would let us touch his master's milk. But listen to the dialogue that took place between me and my sister.

"Oh," says Lucy, "how I should like to have some of that milk! You could reach it, Steve, couldn't you?"

"Yes; but Tom would not like us to take it, would you, Tom?"

Tom's lazy eyes said, "I don't care what you do," as plain as they could speak; but Lucy cried indignantly—

"I believe Tom is a great thief himself, and has no business here. See, his whiskers are all over cream. Let me put my hand in, Steve, and take a little."

"No, Lucy," I said, "I don't think we should imitate Tom's naughty ways. He is only a cat, and thinks there is nothing in the world so good as milk, except perhaps cream."

"And what can be better than cream when you are thirsty?" says that silly Lucy.

"Why, doing what you don't like to do, Lucy, because it is right."

The colour come into my sister's cheeks, and a tear stood in her eye. I had taken her by the hand, and was about to lead her gently away, when I heard something which made my heart jump right into my mouth. A soft but manly voice speaking close in my ear said—

"Supposing I were to help you to some milk, my little friends?"

Of course Lucy and I turned our heads sharply round. As soon as we had done so, we saw a tall portly gentleman, with greyish-black hair, wearing a felt hat and gaiters, and carrying a gold-headed cane in his hand. His gaiters were splashed with mud, and he had a comforter muffled about his throat to guard him from the keen morning air. We stood staring at this gentleman, with our mouths open, without daring to make any reply.

"Tell me," he repeated, "would you like some milk?"

"If you please, sir," we both answered, in a very low tone.

"Then be good enough to follow me."

It seemed so strange of him to ask little animals like us to be good enough to follow him; but I have since learnt that it was part of his habitual politeness.

He led us into a snug room not far from the dairy, first knocking at the door and receiving permission to enter. In this room a cheerful fire was burning, and a neat old lady, whom we presently discovered to be the housekeeper, was busy making tea. On the table there were delightfully thin slices of bread and butter, both brown and white, and a plate of ham sandwiches. The old lady looked extremely surprised at our entrance; but the gentleman held up his hand in a significant manner, as though he would entreat her to say nothing, and then bade us sit down by the fire. Presently he handed each of us a cup of tea, and placed the sandwiches and the bread and butter on a chair between us. We thanked him heartily, and then fell to eating and drinking. I have since drunk many cups of tea; but I have never enjoyed any more than that cup in the housekeeper's room at Halket Hall.

The gentleman than took a cup of tea himself, and began to talk to the housekeeper.

"Well, Mrs. Reynolds, you'll be glad to hear that we've caught those two vagabonds, after a four hours' hunt."

"Indeed, sir?"

"Yes. They're poachers, of course; we found three brace of birds and a hare on them; but I suspect they were meditating something worse than poaching; for they had with them a complete set of housebreaker's tools."

Mrs. Reynolds held up her hands in astonishment.

"These children," continued the gentleman, turning sharply round, and looking at us, "were the means of putting us on the right scent. They told Watkins where they had seen the poachers."

So they were not giants, after all! I confess that I felt a little disappointed.

"And may I venture to ask, Sir Jocelyn, who these children are? Whoever they are, they want washing and cleaning sadly," said the housekeeper.

Sir Jocelyn! So this pleasant-spoken, hospitable gentleman was the baronet of whom I had stood in such dreadful awe!

"As soon as the house is up, Mrs. Reynolds," answered the baronet, "one of the maids must give these children a bath, and then perhaps they'll tell you their own tale at full length. At present I've only heard a second-hand version from Watkins."

Sir Jocelyn then gave a short history of our adventures, laughing a good deal as he told it, and causing Mrs. Reynolds to exclaim every few minutes, "My goodness gracious! did ever one hear of such venturesomeness?"

"But you haven't heard the finish yet," continued the baronet. "Watkins told me he had locked the children into the barn. I hurried home with the charitable intention of letting them out, and I had just put my head into the stable-yard, when I saw a scene which didn't look like reality, but rather like something out of a stage-play. This gallant young gentleman was standing on a heap of straw, steadying a rope which he had fastened to the wall of the barn, while this little lady skilfully climbed down, hand over hand, just as if she had been a foretopman. It reminded me of my midshipman days. And now, my boy and girl, what are your names?"

"Stephen and Lucy Scudamore," we answered.

"There is an author named Stephen Scudamore," observed Sir Jocelyn, meditatively.

"I think he is our papa, sir," said Lucy timidly. "Papa is always reading and writing."

"Dear me! dear me!" cried the baronet, "to think of such a recluse as Scudamore, who never seems at his ease except among his books—to think of his being the father of such a pair of reckless little adventurers! Well, my children, I must leave you for the present in Mrs. Reynolds's hands. We must lose no time. Poor Scudamore will be distracted. As soon as I've refreshed myself with a bath and change of dress, I'll drive them home. You'll be kind enough to have the children attended to, Mrs. Reynolds, and will you also ask Nichols to have the dogcart ready in an hour's time?"

After we had been washed and dressed, both Lucy and I felt very comfortable, but very sleepy, and we nodded and dozed nearly all the way home, so that Sir Jocelyn, who was inclined to be talkative, did not find us very entertaining companions. When the dogcart drew up at our gate, before Nichols, the groom, had time to jump down and ring the bell, my mother rushed out with a great cry of joy, and folded us in her arms. She then turned quite white, and would have fainted away if Nancy had not caught her. No wonder my mother was tired, for she had been out searching for us till midnight, had started again as soon as it was daylight, and had only just come home. As for my poor father, he was so upset that he was quite useless, and my mother, just by way of keeping him quiet, had sent him into London to get handbills printed describing our dress and looks, and to order an advertisement to be put in the *Times* newspaper.

As soon as my mother had recovered her excess of joy, and had ceased to pour out her thanks to Sir Jocelyn for his exceeding kindness, we ventured to ask a question.

"Has Bruno come home?"

My mother answered, with a smile, "Come and see."

She led the way to the stable, Sir Jocelyn Trafford accompanying us. There stood dear old Bruno, contentedly munching his hay, as if nothing particular had happened. However, he pricked up his ears when we rushed up to him and began to kiss him and hug him, so that I really think he was pleased to see us back again.

"Now look into the other stall," said my mother; "and tell me, if you can, how that long-eared creature came here."

We looked into the other stall, and saw the tall young man's donkey, crunching some oats, and looking as calm and resigned as if he had lived there all his life. That faithful Bruno had dragged him all the way to our stable-door. We explained to my mother how the two came to be tied together.

"That good Bruno," said I, "has brought home everything safe. Nothing is missing, not even my pocket-knife."

"We may keep the donkey, mayn't we, mamma?" cried Lucy. "Let us give him a new name. Shall we call him Gipsy?"

"Well, my love, I can't decide about that, but—dear me! good gracious! here's your papa!"

My worthy father entered the stable with his spectacles on his nose, and that dreamy look in his eyes which I remember so well. He held a piece of paper in his hand.

"My dear Margaret," he began very gravely, "I just want to read you the rough draft of the handbill. I've bestowed a good deal of pains on its composition, and I hope you'll approve of it—— Why, bless me!——"

In another moment both his truant children were kissing him.

I have nothing more to add concerning our adventures in Halket Wood except to say the swarthy-complexioned young man never came to reclaim Gipsy, who remained for many years a faithful servant of the Scudamore family.

(*To be continued.*)

Knots and their Uses.

KNOTS? What knots?

There are love knots, matrimonial knots, Gordian knots. These are figurative.

There is the Staffordshire knot, as well as the wake knot. These are heraldic.

There is the Davenport knot, Stodare knot, wind knot, Peruvian knot, and conjurors' knots. These are fancy knots.

There are weavers' knots, builders' knots, sailors' knots, reef knots, fishermen's knots. These are real and useful knots.

But *cui bono?* What's the use?

Listen to the voice of experience, and be wise!

Thirty years ago a lad was standing in a garden gazing at a surging mass of coloured silk, which heaved to and fro over the heads of a dense crowd. The wind was blowing in fitful gusts, and heavy masses of vapour rolled overhead. The crowd had assembled to witness a balloon ascent. Cautious bystanders wished the exhibition to be postponed in consequence of the state of the weather; but the crowd roared, and the aëronaut took his seat in the car. The men who held the ropes were nearly pulled off the ground by the plunging balloon. At last, in sheer despair, the mad and struggling thing was released, and away it went. It rose above the surrounding buildings; but it was obvious to all that the wind was too strong, and that the life of the aërial navigator was in great danger. The boy could see him gesticulating to the various groups of people. He saw the grapnel thrown out. It dragged the ground. There was a pause for a moment in the progress of the balloon; but the bystanders merely gaped. Again the balloon came on towards the boy in the garden. At first he was paralyzed;

but his companion said, "Let us catch the ropes and twist them round a tree." The boy thought that such a scheme was not only wild in conception, but useless in practice. They waited for a few moments, until the grapnel again touched the ground, and tore up the surface of the adjoining pasture. The traveller above called to "secure the guide-ropes when the grapnel caught."

The boys were ready and excited, when the grapnel caught a stump in the hedge-bottom, and checked the mad career of the balloon which fluttered and struggled above them. They rushed forward, seized a rope, and ran round the stump of a tree with it. They were about to do the same with another rope, when the grapnel gave way.

"Hold on, Jack," said the elder boy, "to this rope;" and he took the other, and in a few seconds had secured it round the post of the gate. The ropes creaked; the tree was pulled like a young sapling. The intrepid and daring aëronaut came out of the car, held on by a rope for a moment, and dropped to the earth. The balloon, released of his weight, tore up the gate-post, snapped the cord which tied it to the tree, and bounded into the air.

"Well done, boys," said the late Mr. Graham, when he recovered his breath. "You did more than those fools dare," pointing to the crowd which now hurried up. "I owe my life to your knowing the power of a twisted rope, and having the ability to tie a simple knot."

That was my first lesson in the uses of knots and ties. My second led to a more profound knowledge of the art.

I was staying at Ennis, fishing in the Fergus, when the salmon ran, and occasionally visiting the lakes of Inchiquin, Ballyalla, or Drumconora for trout, when suddenly my rod snapped in the second joint. My cast-line was torn. I was in the most deplorable plight a young angler was ever in. There were fish in plenty; but my cherished rod was spoilt, and days must elapse ere it could be replaced.

"What could I do?" I asked, in a tone of chagrin.

"Take it to old Jack," said an old fisherman; and to "old Jack" I took it.

"Old Jack" was one of the kindest and most genial old tars I ever met with. His name was, I believe, McDonnell or O'Donnell, and his Christian name was Donagh, Donald, or Dermod, or some Gaelicized Bible name, which was supplanted by the universal Jack. Though he had lost an arm in the "untoward affair" at Navarino, he could "tie a fly" or make a rod with any man in Munster. He was equally the pet of the officers of the garrison and the boys of the town. To one he sold his excellent rods; and he mended the broken tackle of the

other with equal gusto. He was very poor, yet he maintained an infirm sister and himself in respectability on a small pension and the produce of his rod and fly making. His well-balanced four-joint sixteen-feet salmon-rod was a beauty—the lower joint of ash, the two middle ones of hickory, and the top of greenhart. It made one's blood tingle to feel the pliant, well-balanced switch, and to know that the lordly salmon was almost within reach. The accident to my favourite rod introduced me at once to "old Jack," and initiated me in time into the further mysteries of "knots, ties, and splices." In the course of a few minutes he produced a small bottle of liquid glue, with which he anointed the broken rod, and "whipped" the splintered parts with fine waxed cord. He did it so readily that I wondered at the neatness, strength, and renewed symmetry of my "equal-to-new" rod. A few well-made knots mended my line, and a new world opened up before me.

What's the use of knots?

Why, it saved ten lives when the *Serrano* was wrecked; it enabled me to reach the *Gipsy* when she left her moorings with two boys on board; it lengthened and firmly united the bed cords at the fire in Staple's Buildings, which enabled two people to escape from the upper-floor windows. At a hundred times and places the art—for it is an art—is useful. We know that Napoleon ennobled the inventor who could tie a knot in a piece of stretched string. Our ships are a mass of knots; and only last month a number of lives were lost in a Staffordshire colliery because the man who mended the rope did not know how to splice properly. The wonderful hero in "Foul Play" would have been much more wonderful if he could have knotted, knitted, netted, and spliced well; but the lady was the superior genius here, and had to make the nets.

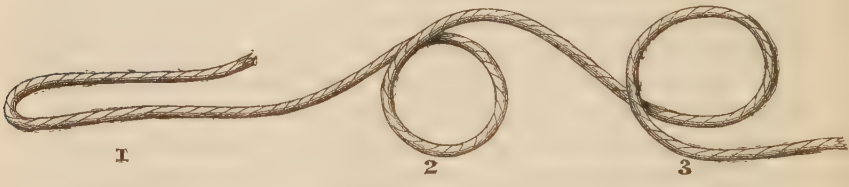
There is a good deal more of philosophy in a piece of string than some people imagine.

A good many of our boys have doubtless amused themselves by untwisting a piece of whipcord, which in reality is a miniature rope; and in doing so must have noticed the use which has been made of the original twist of the filaments of hemp or flax to bind the whole together into one continuous line. This is done by twisting the yarn in opposite directions, so that they bind together. If the strands (as a number of yarns are called) were twisted one way only, they would untwist themselves and part at the slightest strain; but advantage is taken of this tendency to untwist, and the result is that a hard, firm cord, bound together by the friction of its parts, is the result of laying

strands together which have been twisted in opposite directions. According to the number of strands and variety of twists, the varieties of twine, cord, marline, ropes, hawsers, and cables are made. Into these distinctions it is hardly necessary at present to enter. I am now about to tell you of knots, ties, and splices.

How few there are who can tie a knot securely, though it is an operation that we have to perform nearly every day of our lives! Nearly every trade has its special knot, which has been handed down from father to son, and from master to apprentice, for any number of years. I shall touch on these by-and-by; but at first let us glance at the knots used in uniting two pieces of rope or string together. If one of our boys should attempt to join two pieces of whipcord together, in all probability he will tie what is called a "false" or "granny" knot, or simply connect the two ends by an "overhaul knot"—a useful but clumsy connection, not so well adapted for his purpose as the sailor's, weaver's, or fisherman's knot.

To begin at the beginning. All knots are commenced by either "loops" or "hitches," and these may be single or double, as required :—

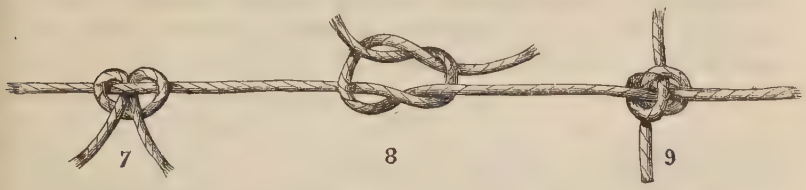


1 Hitch. 2 Underhand Loop. 3 Overhand Loop.

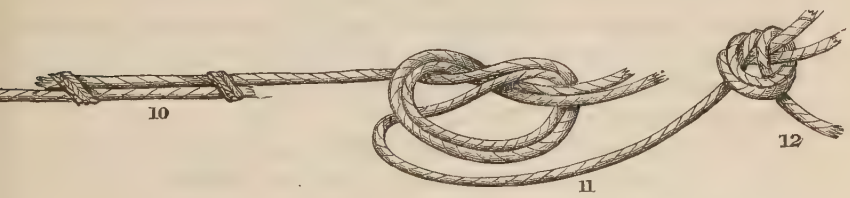
4 Loops for commencing the Sailor's Knot. 5 Loose Sailor's Knot. 6 Drawn taut.

Thus fig. 1 is a simple hitch, fig. 2 is an underhand loop, and fig. 3 an overhand loop. When two loops are crossed together (fig. 4), it forms the commencement of the famous sailor's or reef knot, fig. 6, which is shown loosely formed in fig. 5. In this knot the two ends lie close together; and when the ropes are of equal thicknesses, it forms one of the best knots known for uniting two pieces of rope, twine, or cord. If, however, the ropes are of two thicknesses, the knot will slip and form a loop, as

in fig. 7, and part company. If the ends are not laid parallel to the rope, as in fig. 8, it becomes the false or granny knot. On a comparison

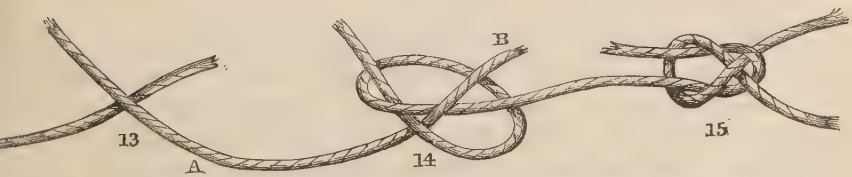


of figs. 9 and 6, where the two knots are shown drawn taut, the difference in neatness and compactness will be at once apparent. The reef knot may be made either underhand or overhand, as may be most convenient. If it is necessary to use ropes of different thicknesses, then the ends of the sailor's knot must be wrapped or tied to the cord, as shown in fig. 10, which shows a very useful and neat method of joining two ropes, if time is not an object. On the other hand, the "open-hand" knot is one of the quickest made; it has also the recommendation of never slipping or untying. It remains firm; but, if a great strain is put on the rope, it is more apt to break at the knot than many of the other knots. Besides, it is thick, heavy, and clumsy,



whether tied to the right or left. Fig. 11 shows its open formation from the front, and fig. 12 its back view when drawn taut.

For small cord or twine, the weaver's knot is perhaps the best; for thread it is incomparably the best knot, and easiest made. The two

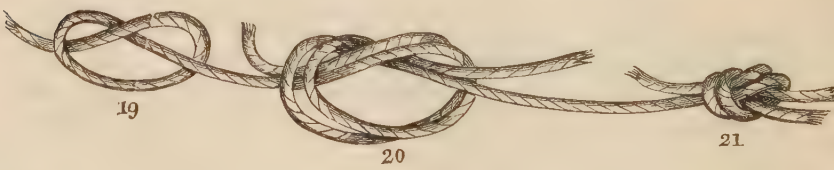


ends are taken and crossed, as fig. 13, and both cords are held between the thumb and forefinger of the left hand. The right end (A)

is then looped back over the left end and brought under the thumb, where it is held fast, while the right-hand end (B) is slipped through the loop at C; the knot (fig. 15) is then formed by tightening the right-hand cord. If cord thicker than thread is used, the end B must be held between the thumb and finger of the left hand whilst the knot is being drawn taut, as in fig. 16.

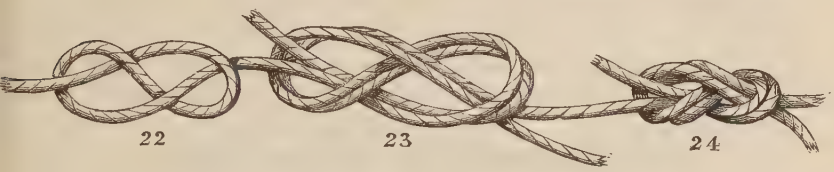
The "fisherman's," or, as it is sometimes called, the "Englishman's," knot is of quite another character. It is formed of two simple knots (*see* fig. 19) slipped over each cord, as in fig. 17. When drawn taut, its front appearance is shown at fig. 18. It is a very useful knot. To anglers it is invaluable, as it may be separated by taking hold of the ends A, B, so as to admit a third line between them as a "dropper," in fly-fishing. In joining gut-lines the same knot, left a little apart and the intermediate opening wrapped or whipped with silk, forms one of the strongest and most reliable fastenings known. Mr. Cholmondeley Pennell, who subjected this knot to a series of experiments, found that the line snapped sooner at any other part than at this knot. It is also very useful to join ropes for temporary purposes only, as it is firm and may be easily untied.

The "ordinary" knot or tie, for uniting large ropes, is shown in fig. 20. It has all the advantages of the open-hand knot, with the



additional recommendations that it is easy to make, very strong, and does not strain the fibres of the rope. It is formed by first making a simple knot (fig. 19), and then interlacing the other cord in the manner shown at fig. 20. When drawn taut it has the appearance of fig. 21. However great the strain, it does not injure the rope, which keeps also in a straight line, which it will not do with the open-hand knot, figs. 11 and 12. If the ends are whipped with twine, as shown in fig. 10, it is really a neat and handsome as well as a useful knot.

Another knot, which may be termed a shortening tie, is shown at fig. 23. It is a handsome knot, and is used when there is too much rope, and where it is necessary to use a large knot for the purpose of preventing its running too far through an eye, ring, or loop. It is



22 23 24

formed by making the figure of eight knot at the end of a rope, which is a double knot, and then interlacing the other rope through it, as in fig. 23. When drawn taut it has the appearance of fig. 24.

These are all the knots, properly so called, used for the purpose of uniting two pieces of rope which have simple ends. The knots are very different when one rope has a temporary or permanent loop. If our boys perfect themselves in these, perhaps another time I may be permitted to add some further instructions in knots and splices.

The "Wake Knot."

Far Away in the Frozen Seas;

OR,

A STORY OF A WHALING EXPEDITION.

CAPTAIN GRIFFIN and his family lived in New York, the greatest merchant city in the United States of America. They were in very comfortable circumstances; for the captain had been at sea for many years, and had visited all parts of the world. He was besides a considerable shipowner, and had made much money by his cargoes. His whaling expeditions had been particularly prosperous, as every vessel brought back a heavy freight of blubber and whalebone, which he always managed to dispose of in the best market. Having thus amassed considerable wealth, his wife earnestly implored him to give up his dangerous and laborious occupation, and devote the rest of his life to quiet domestic enjoyment.

Captain Griffin could not long resist her entreaties, though sorely against his will; for he was still a man in his prime, and full of health and strength. He gave way, however, to his wife, retired from active life, turned his ships into gold, and took up his abode in a handsome house in the Broadway, which he paid down for, in hard cash, on the spot.

It was a beautiful house, and so elegantly furnished that nothing better could be desired; for Captain Griffin had no need to study economy, and scattered his money with a lavish hand. No one could help admiring the rooms, and many a man envied the fortunate possessor, who seemed to have every blessing heart could wish; for, besides

his worldly wealth, he had riches that far outweighed in value the yellow metal for which men so pant and strive. He had an iron constitution, and such vigorous health that nothing could shake it; and he had a noble, loving wife, and two healthy, beautiful children, that any father might have been proud of—a boy of fourteen and a girl about ten years old. The captain loved them both dearly, and rejoiced quite as much in his bold, clever Robert, as in his loving, gentle Lucy.

"That lad will be a famous sailor some day," he often said to his wife when he looked at his tall, strapping son. "It's only a pity that I can't initiate him myself into all the mysteries of his noble calling. I have buried myself too soon, dear wife, in this lazy, do-nothing, stay-at-home life."

"Don't say that," she replied. "You have fairly earned your rest by long, weary years of hard and dangerous work. Just have a little patience, and you will be happy enough at home. Don't we all love you to your heart's content?"

"I should be indeed ungrateful were I to complain on that score," said Captain Griffin. "A better wife than mine no sailor could wish, and the children are so good and loveable; but still, after all, I am not old enough to give over work yet—not much past forty! What's that? I have plenty of strength left in me, and this lazy life does not do with me."

The conversation would generally break off abruptly with a sigh, and his wife was only too glad to drop the subject; for her husband's passionate longing after his old hazardous, unsettled life always made her uneasy.

However, this passionate longing became more intense each day, and gave the captain no peace, though he had tried his utmost to conquer it and conceal it in his own breast. He had been happy enough at first, while he had plenty to do in arranging his affairs, buying his house, and then furnishing and decorating it. But as soon as all was ready, an unwelcome guest began to keep him company, and he could scarcely succeed in getting rid of him. The demon of *ennui* held him fast in his chains, and it was not at all surprising; for the captain had always been accustomed to an active, stirring life, and his present idleness went sorely against the grain. He tried amusement and occupation, read a great deal, and thoroughly instructed his boy in navigation. Often he went excursions by land and by water, and visited every haunt of pleasure.

But it was all in vain. If he sat within the four walls of his own room, which he had fitted up exactly like a cabin, and gazed at all

the mementoes and souvenirs of his former life which hung round, he would sigh; and if he chanced to meet a sailor, or an old companion to whom he might pour out his sorrow, he would sigh again. In short, there was no end to his sighings and longings, and every day he became more gloomy and ill-humoured. There was a settled look of discontent on his brow, and instead of the bright, cheerful man he had hitherto been, he was nearly always surly and cross and irritable. The only thing he cared for was to go down to the harbour, and watch the busy, swarming multitude going to and fro. He would sit there for whole hours looking at the vessels going out, and talking over the golden past with old comrades; but invariably would wind up with a sigh, and exclaim, "Ah, well! all that's past and gone for ever!"

The captain's wife, and even his children, could see plainly enough what troubled him, and chased away all his cheerfulness; but they hoped he would gradually get accustomed to his new life, and feel content and happy. However, they were mistaken. Captain Griffin's ardent desire to make one more voyage on the deep blue sea was hourly becoming stronger, and at last got perfectly irresistible. One day in the month of May, when the whalers all begin to start for the far distant north, he came home with such a brisk tread and beaming countenance, that his wife noticed the change immediately. He looked as if his mind were made up, and a painful foreboding came over his wife, and made her exclaim—

"Oh, Griffin! you have taken a wrong step."

"No, dear wife; a right one," he replied, in a firm tone. "You see yourself what a prey I have become to discontent and misery; and, great as my love is for you and the children, I cannot conquer my desire to be up and doing. This day a casual circumstance has decided it; and I mean to make at least one more voyage to the Arctic regions."

"No tears over it, pray," he continued, as his wife burst out crying, and flung herself into his arms. "I give you my promise it shall be my last voyage; but let me go this once without fretting and making a disturbance; and just bear in mind that this lazy, idle life would in the end have killed me outright, if I had not made short work of it somehow."

"But what would you have, my dear, good husband?" asked his wife, still sobbing.

"Excitement and activity. Ennui would eat me up, as the moths would an old skin; and if you don't want to see me die by inches before your eyes, let me go in peace, and wish me luck."

Mrs. Griffin saw clearly enough that her husband's resolution was unalterable; so she submitted, and said, with all the composure she could muster—

"Well, then, go, and God be with you. My tears shall not keep you back, for it is true enough that you are pining and worrying yourself to death. But you are quite sure this will be your very last voyage, Francis?"

"Certainly, Ellen dear; the very last. I just want to satisfy my desire once, and have a turn at harpooning whales, and get a good hearty draught of fresh sea-air."

"Very well, then, so be it," said his wife; "but what's the cause of such a sudden move?"

"Oh, that's soon told. I was down at the quay looking at Captain Becker's fine brig, the *Eleanor*, which is lying at anchor in full trim for sailing. Such a splendid ship and first-rate crew!—all trusty, weather-beaten men, and some of them old hands of my own. I was envying Captain Becker in my very heart and soul, when all of a sudden I saw the steersman of the *Eleanor* pass by me, looking quite sad and downcast. I knew the honest fellow long ago, so I called out—

"'Halloo! What is the matter, John? What are you after?'

"'Ah, Captain Griffin," he said, touching his cap, 'it's a sad thing!'

"'What is a sad thing, John? If it is nothing private——"

"'Oh, nothing private, sir,' he went on. 'It is only that Captain Becker is not able to sail. He has fallen down and broken his leg. There he is lying at home in his bed, and his wife crying and lamenting, and the *Eleanor* lying here. What is to become of her Heaven knows! but Captain Becker is a ruined man, for his whole fortune is invested in that ship; and where shall I find a purchaser this minute who will take it just as it stands, and pay him down in hard cash?'

"It darted through my head like lightning, dear wife," continued the captain, "that this was perhaps the thing for me. I could make my old friend Becker happy and set his mind at rest, and at the same time get deliverance for myself from the weight of gloomy discontent that so oppresses me.

"'John,' I replied, after brief deliberation, 'the buyer is found who will give the full value of the whole outfit, to the last penny; so that my friend Becker may have time to recover quietly.'

"The good fellow's eyes sparkled with joy as he said—

"'That would indeed be a blessing for him and his family. Pray, sir, may I ask the gentleman's name?"

"'It is just myself, John,' I said.

"'Hurrah!' he exclaimed, and waved his cap. 'And you'll go as captain, sir?'

"'Of course,' I said. 'And in three days from now we sail.'

"Again he shouted, 'Hurrah for Captain Griffin!' and could scarcely speak for joy.

"Well, at last I sent him on board to tell the news and to complete all the preparations for sailing, while I went to my old friend Becker, and the business was all settled in a few words. The poor fellow loaded me with blessings, and his wife all but kissed my hands. I felt very glad it had been in my power to help him in his need, and it really almost seemed a sacred duty, even if my own wishes had not so completely coincided with it. I believe God will add His blessing, and, relying on His protection, I start in three days' time."

"And you'll take me with you, father?" said Robert, eagerly, who had slipped unperceived into the room and heard the whole account. "Take me with you—oh, do, father! I must go with you; please say yes, father—please!"

"Ay! wouldn't you like it, silly boy?" replied the captain, smiling. "An Arctic voyage is no pleasure-trip, and anyway, you are far too young yet for the toils and dangers the whale-fishers have to encounter."

"Oh, father, I am fifteen, and stronger than all my companions and friends," said the brave lad, drawing himself bolt upright. "Just look how tall and strong I am. There are plenty of ship-boys that I should feel quite a match for. Do take me with you, father. It is to be your last voyage, so let it be my first. I'll promise you to be brave and plucky, and never to complain, whatever comes."

The captain's eye rested with evident satisfaction on his tall bright boy, and he seemed half inclined to grant his request, but at this juncture the poor wife interfered, and said, "No, Francis, you wouldn't grieve me so. It is bad enough to do without you for so many months, and sadly to count the days till you return. You are not surely going to double my sorrow by taking away my boy. You wouldn't do that, Francis!"

"No, my dear wife; calm yourself," replied her husband, with a look that quenched all the lad's hopes. "Don't give it another thought, Robert. You are really far too young, and, in spite of all your health and strength, for which God be thanked, you are not nearly hardy enough yet for such an expedition. Even if you were, I could not take you with me. Your mother has also a claim on you, and we must not distress her. All in good time. There'll be many a blast, never fear, to blow about your ears, if, with God's help, you turn out a brave sailor. So not another word about your foolish wishes. You are to stay by

your mother, and be her joy and comfort, I hope, while I am far away."

"Yes, indeed, I trust so, too," said the mother, folding her arms round the boy. "You wouldn't like me to fret myself into my grave, Robert?"

"No, mother, no," said her son, in an earnest loving manner, as he saw the tears in her eyes. "My wish was too thoughtless and hasty; but you must forgive me. I will stay at home with you, and we will both pray that God will prosper father, and send him safe back to us."

"That's well said, my boy, and it makes my heart glad to hear it. I shall go away with a much lighter heart now I know I can depend on your good sense."

His father's praise sounded sweet to Robert's ears, and though he would fain have accompanied him to those famous northern shores, about which he had heard so many wonders, he bore the disappointment without a murmur, and always showed his mother a quiet, happy face.

Captain Griffin's next business was to arrange all his affairs. He examined the ship with the most minute care, and mustered the crew. The result completely satisfied him, and he said to his wife, "You may be perfectly easy, dear wife. A better ship and a finer crew never entered the Polar Sea. If God be only with us we have nought to fear. The whole fitting-out is excellent. We have provisions enough for a year, and longer, and we are well stocked with everything to shield us from the piercing cold. Yes, truly, my friend Becker understands his business. He has even taken care to provide warm thick huts that can be put up very quickly, and fire-arms and munition, too, in case we might chance to be so unfortunate as to be shipwrecked or frozen in among the ice, so that, if the worst came to the worst, we should be sure of a shelter and the means of obtaining necessary food. However, I hope all these precautions may prove unnecessary. You may rely on my foresight and prudence. I will not endanger myself or my crew by any foolhardiness. Perhaps I may be home sooner than you think, and then, please God, we'll never part again."

"Heaven grant it!" said his good wife. "God have you in his safe keeping! I shall count the days till you return, and always remember you in my prayers."

The day for sailing soon came, and Captain Griffin went on board the *Eleanor*, accompanied by his wife and children. He took them all over the ship, and made them notice her build—how firm and substantial it was, and yet so light and elegant. He showed them all the provision-stores, the water-casks, and the great pile of skins—the best possible

protection against the cold, and let them examine the huts in readiness for any emergency.

This much alleviated the pain of parting, as it removed all anxiety as to the comfort and safety of those about to sail. Then came the last "Good bye, and God bless you!" The captain tore himself away from his wife and children, and saw them step into the boat that waited to take them ashore. A minute later the signal was given, and away went the *Eleanor*, with all her sails unfurled to the breeze, gliding over the waves like some majestic swan with outspread wings. His wife followed her track with tearful eyes and heartfelt prayers till she was out of sight. She could not help feeling a little troubled and uneasy, but her trust was in the Lord, and she could commit herself and her loved ones to His care, well assured that He would do all things well, whatever came

(*To be continued.*)

HUNTING.

Hunting.

By SIDNEY DARYL.

I AM bound to say that, speaking for myself, I am far from being what people would call a courageous equestrian. My earliest recollections of riding are connected with a certain grey pony possessed of a very broad back, whereon I was initiated into the principles of equestration at a certain Brighton riding-school that shall be nameless. Owing to my then tender age and proportionately diminutive figure, it required no slight exertion on my part to sit astride that amiably-disposed but corpulent animal: indeed, my juvenile legs were extended at an angle of I don't know how many degrees. Apart from this drawback, the animal in question was faultless. Nothing could have been better regulated than the imperturbable steadiness of his trot, or the dignified pace at which he walked, in neither of which respects could the most liberal application either of whip or spur in the least degree unsettle him. Thought I, "If all riding is like this, and all horses or ponies equally quiet and well ordered, I know of no amusement I could like better."

But with my separation from the grey pony commenced a series of experiences, singularly varied and remarkably unfortunate as regards my share in them. Of one thing I am quite certain: had I possessed that nerve and courage which are so essential to the proper enjoyment of riding or hunting, in all probability I should have suffered many fewer mishaps and been a deal better amused. Those, however, are two qualities that are born with us, and not created by ourselves within ourselves; consequently, if we have not the good fortune to possess them, that is not our fault, but our misfortune. I have now vividly

before me the black pony with two white feet to whom I had to transfer my affections when I was pronounced sufficiently advanced in my riding studies to take the road. From the first moment I saw him I conceived the most decided aversion for him, and I have had every reason since to believe that that feeling was heartily reciprocated. His obstinacy and determination, under certain circumstances, would have done him the highest credit; but when they took the shape of getting the bit between his teeth, and bolting, or standing stock-still in the middle of the road, and refusing to budge an inch, they were both offensive and exhausting. I never got upon the brute's back without anticipating some serious disaster befalling me. Sure enough, one fine day he made off with me, not even having the politeness to give me warning in time to dismount; and I found myself finally pitched over a fence into a market-garden all among the cucumber-frames, with a nasty cut in the cheek, and Master Pony close beside me on his back, too, quivering and quaking all over as if he had the ague, and altogether presenting a contemptible and warning spectacle. Probably it will not be thought very surprising that I did not mount him again; but I took some interest in his ultimate history, and I have since learned that, being reduced to the position of drawing a basket-chaise, he one day ran off with it, and, endeavouring to make his way into a linendraper's shop through the plate-glass front, brought himself to such terrible grief that the doctor who was called in, felt, in pure humanity's sake, bound to recommend that his sufferings should be terminated with powder and shot. Anything more blind and wilful than the conduct of this animal, who thus brought himself to an untimely fate, I cannot conceive. The scream of a railway whistle frightened him, with me on his back, into the cucumber-frames, and for this some excuse might be offered; but in the second instance an Italian organ-grinder with a monkey was the sole and inadequate cause of his bolting.

Talking of these matters, and to come more particularly to the subject of which I am supposed to deal here, recalls to my mind the incidents connected with my first day's hunting. Without saying how many years ago it was, an opportunity presented itself for me to carry out an idea I had long entertained of seeing how I could manage to "go across country." Upon previous occasions I might have, with little difficulty, put myself through the ordeal; but I entertained no slight misgivings upon the subject, and when it really came to the point, I shrank from making the experiment. At last, however, the opportunity referred to came, and in such a way that I could not refuse to avail myself of it. I was staying down in the country during the holidays at

the house of one of my schoolfellows, whose father was a noted fox-hunter, and during the season always had, not only his residence, but his stables fully occupied; in fact, very little else was spoken of or thought about. So many packs of hounds met in the neighbourhood that, for those who liked the sport, there was hunting to be had every day of the week; and sure enough each morning after breakfast everybody was off in search of it somewhere or other. As for my schoolfellow, his father, entertaining so high an opinion of the sport, had taken care to train him up to it; and not a few of the knowing ones in the stables and down in the village declared "that you couldn't find a lighter hand or a neater seat on a horse than Master Robert's." Fear was a thing I can say that he never suffered from; consequently he possessed all the necessary elements to constitute a good cross-country rider. He, too, was out hunting almost every day; and I, being the only other youngster about the house, began to find it rather dull when everybody started off the first thing in the morning, leaving me to amuse myself as best I could. Of course I could not go bothering the ladies with my presence; and rabbit-shooting alone is not a very exhilarating amusement. More than once I had made up my mind to ask permission to try the experiment of going out with the rest to the hunting-field; but at the last moment my courage gave way, and I held my peace. One evening, however, at dinner, as usual, when the dessert had been placed upon the table, conversation turned to the doings of the day and the excellence of the run, in which it appeared that Master Robert had greatly distinguished himself. As I listened to the account of his exploits, which were duly enumerated by the gentleman who was sitting on my right, I could not help feeling fired with a kindred enthusiasm to that displayed by the narrator.

"I think," said mine host, speaking from the top of the table, his eye beaming with pride and delight at the praise bestowed upon his son, "that every boy, if those to whom he belongs can afford it, should be taught riding, and have every opportunity afforded him of practising it. Come, young gentleman," he added, suddenly fixing his eyes upon me, "how is it you do not do anything in that way?"

I duly explained the amount of my knowledge of equestrianism, the result of which was that it was settled by acclamation that I should make my first appearance in the hunting-field on the following morning. It would be extremely difficult for me to describe the conflicting emotions by which I was disturbed for the rest of the evening, or the troublous dreams that attended me during the night. The number of terrific runs and hair-breadth escapes I had in imagination

found me in an exhausted and melancholy condition when the breakfast bell rang, and I hurried down to the dining-room. A vague idea had occurred to me of asserting that I was seriously indisposed and incapable of undergoing the proposed exertion; but this I abandoned as a pretence too shallow not at once to be seen through, and in the wildness of my despair devoured stewed kidneys and poached eggs till it was announced that the horses were at the door, and it was time to start.

"Look here, old fellow," said Master Bob, coming up to me and patting me on the shoulder, "I thought you had better ride 'Taffy.' He knows his work thoroughly; and so long as you sit firm, and let him have his head, he'll pop you over everything like a bird."

Now this was precisely what I did not want done. I was not in the least ambitious of being popped over like a bird; on the contrary, I should infinitely have preferred a steady-going animal like my old friend the grey pony, who, with excellent discretion, would, I am quite sure, have studiously avoided any such gymnastics. It was pretty evident that "Mr. Taffy" would give me a pleasant day of it before he had done with me. However, there was no help for it; he was at the door, and in a few moments more I found myself careering down the chase in company with numerous red-coated gentlemen, whose complacency and indifference to me did not reassure me. "Taffy," who had had several days' rest, was proportionately fresh, and could by no persuasion be induced to halt, but kept up that perpetual jog, jog, which so upsets you early in the morning. The meet was only some two miles distant, at a farm-house, which we were not very long in reaching. A considerable number of persons had already assembled, and, at the moment of our arrival, the hounds were on the point of being put into the cover. What with the blowing of horns, and the general bustle consequent on this proceeding, Master Taffy grew exceedingly boisterous, and flung his head about, and pulled at his bit in a way that I could not but strongly deprecate; moreover, he showed a strong predisposition to cut in with the hounds, in which proceeding he was summarily checked by one of the whippers-in, who gave him no end of a crack over the nose with his whip as he galloped past, a punishment which for a moment left the culprit aghast with astonishment. But as soon as he had collected his ideas he was more tiresome than before, and indicated a malicious intention of falling back upon me and crushing me on the spot.

"Keep yer hands down, and hit him over the head!" shouted an old farmer who witnessed this portion of the performance.

But I had no time to carry out his suggestion, as at that moment there was a loud cry of "Gone away!" followed by blowing of horns, and a general rush round one corner of the cover, in which Taffy, regardless of all control from me, took a prominent part. Reins were being gathered up, hats firmly pressed on, and it required no great ingenuity on my part to discover that the hounds were running, and that I was in for it. Whatever might have been my inclination to shrink from the ordeal through which I was now to pass, it would have had to give way to Master Taffy's will, who paid not the slightest attention to his bridle, but went right away after the hounds as hard as he could. He certainly did know his business with a vengeance, and literally left me nothing to do but calculate how soon my neck was to be broken. The first few jumps were of a trifling character, but at length we came to a big ox-fence with an ugly ditch on either side, and a take-off out of heavy ploughed land. As it drew nearer and nearer, and I was able to appreciate its character, I felt perfectly satisfied that the catastrophe I had so long dreaded was at hand. Taffy, however, seemed in no way disconcerted by the obstacle before him, but, pulling himself together, and pricking up his ears, prepared for the effort. I may say confidentially, now, that I entertained the strongest possible inclination to throw myself off; but this, after all, would only have been jumping out of the fryingpan into the fire, as close behind me was a perfect squadron of horsemen, who would, without being able to prevent it, inevitably have ridden over me. However, the crisis came, I shut my eyes, and, feeling Taffy rise in the air, fully expected a terrific smash; but luckily I was doomed to disappointment, for, with the exception of a slight stumble when he landed, the plucky little fellow had cleared an obstacle over which no end of the big ones came to grief. This much reassured me, and by the time we reached a fence that took us out of the same field I felt infinitely more comfortable in my mind. Probably no one ever played so prominent but involuntary a part in a run as I did in that thirty-five minutes' burst.

Of course I was in at the death, such being Taffy's determination when he started off with me; and though I should like to have felt better able to control his paces, I have many times since wished I could find an animal who like him knew his business, and who could pop you over your fences like a bird in place of popping you into them. For I know nothing more disagreeable than having to get across country upon the back of an animal who is given to refusing his fences and requires continual watching. I can assure you I met with no slight applause at dinner that evening, it being generally supposed that my forward

position in the run was due to my own act, upon which point I took good care not to disabuse anybody's mind. I can most conscientiously say that from that day I have had much less fear on horseback, and though the ordeal was a somewhat trying one, my escaping from it safe and sound has emboldened me on many occasions since to regale myself with a day's hunting.

I hope my readers will forgive this very egotistical paper, but I hold that practical experiences are best calculated to impart information. I might have entered into a lengthened and elaborate dissertation, showing how upon scientific grounds a man should take his seat upon a horse in a particular way, but for all that I doubt whether I should have made any one of our boys the better rider for it. Given a cool head, calm pluck, and a steady hand, and every boy who finds himself on the back of a horse for the first time will in a very short period discover that the art of riding is acquired with the greatest possible ease.

The Nohak-Burner.

By JAMES GREENWOOD.

CHAPTER I.

THE TERRIBLE POWER OF NOHAK. . . . . .

TANNA is the most flourishing island in Polynesia. Its inhabitants number at least ten thousand; and of these five thousand are warriors—magnificent fellows, both as regards stature and raiment, and of prowess so indomitable, that even in warlike Figi the braves hold their hands before their mouths and whisper low when they would say aught in disparagement of the Tannese. The king of Tanna is a great king. His spoken word rules the country, and he may spend men's lives as freely as the cowries that 'hang in a bag at his girdle. He wears wristlets and anklets of gold, and his necklace is composed of pearls and sharks' teeth. But there is in Tanna a man greater than the king even.

Knowing no other, you might take him for a beggar. A poor old fellow, shrunken and bent and grey, and not so well dressed as a boat-builder even. He carries a staff as tall as himself, and, with his head bent and his eyes to the ground, he limps and shuffles through the village, everybody avoiding him and giving him the full breadth of the path.

And if he carried nothing beside the staff, doubtless he would be a beggar. It is his other hand's burden that makes him the greatest man in Tanna, and more to be feared than the king himself. It is not very terrible to look at, being nothing more than a quaintly-shaped pot of baked clay, with a handle made out of tough bark cord. The pot is not empty. There is fire in it; just about as much as would fill a

man's two hands. Not a bright fire; but smouldering, and emitting a foul yellow smoke that may be smelt at a street's length. A common-looking little fire enough, and just such a one as a beggar might make to warm him, and cook his supper out of any dry wayside rubbish he picked up on his way.

Beware that you mistake it not for common fire, however. It is Nohak's fire; and should you give offence to the Nohak priest who carries it, you had better never to have been born. His power is terrible. Excite his wrath, and, though you be never so hale and full of life and vigour, you will presently pine like a bush in the time of drought, and wither and die. Not that the priest of Nohak will pursue you with his fire-pot, and apply its contents to your body; you under-rate the awful power of Nohak if you think such a vulgar process necessary to its development. No; it can hurt you at a distance. No matter how far off you may be when you give offence; no matter, though the whole length of the town, with all its huts and the king's palace, intervenes between you,—you shall suffer. All that is necessary to the working of your destruction, is for the Nohak priest to gather an armful of any rubbish he may find lying about—scraps of matting, bits of wood, &c.;—and, retiring to a convenient corner, make a pile of the rubbish, and fire it with the fire of his Nohak pot, simply saying, as he adds more fuel, a bit at a time—"This is so-and-so; so may his life consume;" and forthwith the offender will sicken, and continue to do so until death, just so long as there remains a spark of fire in the rubbish the priest is burning against him; and at any moment the priest may quench the fire, or he may fall asleep and so neglect to feed it, and allow it to die out unwittingly. No matter; however the fire may become extinguished—except by the priest's good will, gained by supplication and the making of a suitable present—with its last spark life departs from the offender's body.

So, at least, the Tannese believe; and surely they should know. They have good reasons for knowing. Belief in Nohak is not an affair dating no further back than yesterday. Their fathers died of Nohak's fire, as did their grandfathers, and their great-grandfathers, and their most remote ancestors, since the grave-mounds began to dot the hill outside the town. One day the priest will light a fire for them, and nothing but their expiring breath will serve to extinguish it.

Since then Nohak means disease and death; and there could be neither one nor the other without its baneless influence. Why do not the Tannese abolish it? What becomes of the strength and bravery of their five thousand warriors, since they meekly submit to the fatal

despotism of this wretched old beggar with the staff and clay fire-pot? Why do they not lay hands on him as a common murderer and arch-plotter against the peace of Tanna, and club him to death, and consume him with the embers of his own detestable fire?

For a mighty good reason: since, as the smallest child in Tanna can inform you, to extinguish the Nohak priest would have no more effect on the fatal fire than though a man spat at it. Nohak is of divine origin, the little Tannese boy could tell you; and the man that carries the pot in which it is kept alive has really no more to do with it, or is responsible for its terrible power, than the pot itself. He is merely an agent selected from amongst men by the gods themselves, and protected by them in this world, and eternally rewarded, supposing that he performs his duties fearlessly and without showing favour. So, far from benefiting by putting the Nohak priest out of the world, the people would be losers to a lamentable extent; for then the gods would take the fire-pot into their own immediate care, and, though it would be hidden from the sight of men, it would still be kept burning, and remain, under the direction of the gods, faithful to its old mode of burning men's lives out, or of breeding all manner of painful diseases amongst them; and the Nohak priest being put away, there would be no means of communicating with the offended powers, with a view to ascertaining the manner and quality of the offence, and by what extent of sacrifice atonement might be made.

Therefore, it is manifestly to the interests of the Tannese, not only to tolerate the presence of a Nohak priest amongst them, but to treat him with kindness and consideration, and show towards him that awe and reverence befitting his mysterious office. And so they do; and the fact already mentioned, that they give him the path and avoid all conversation, is no proof that he is not respectfully treated. On the contrary, it would be accounted an impudent thing to address the Nohak priest as though he were a common person. He must never be spoken with unless on business, and the method of summoning him is peculiar and unmistakable. In every Tannese hut there hangs just above the doorway a sort of horn, made out of a spiral shell-fish commonly found on the sea-shore; and when this is blown into, it emits a harsh and hollow sound that may be heard a very long way off. When a member of a family falls sick, it is time to consult the Nohak priest; and the father or the brother of the sick person sounds an alarm on the horn, and hangs a light at his door if it be night, or thrusts out the horn itself, at the end of a spear, if the calamity should happen in the day time. By these signs the priest discovers the house where his

presence is required, and makes his way there. Then comes the anxious question—"Why is the priest burning against the man, and in what degree is the Nohak god offended?" A glance at the object of the inquiry will enable the priest to reply. Should his experienced eye detect that the indisposition is but slight, he will recommend that some trifling present be made to the gods, and obligingly volunteers to carry it away with him there and then, and render the offering with his best wishes for the recovery of the patient; but if, as of course will happen at times, he perceives in the sick man's symptoms evidences of approaching dissolution, then he declares simply, "Nohak must burn,' and stalks out of the house of sorrow, carrying away with him all hope.

Their belief in the depth of the sea and the stability of the land is not more settled with the Tannese, than is their faith in Nohak and its wonderful authority over the lives of men. As witness the miserable fate of the daring and foolish Arri Winnikeep, who once upon a time sought to set Nohak at defiance, and make it a tool towards the outworking of his contemptible ends.

CHAPTER II.

IN WHICH ARRI WINNIKEEP KILLS HIS FATHER, THE OLD SPEAR-MAKER.

ARRI WINNIKEEP was not a Tannese by birth, but a Samoan. His father was not a fighting man; indeed, he was lame of a leg, and little and short, and of no use at all in the battle-field. But if he could not wield a spear, he could forge one. For many years before he settled in Tanna his name was commonly known there on account of the excellence of the arrows and spear-heads of his make; and while Arri was still quite a little boy, his father was invited, on handsome terms, to come over and set up his smithy in Tanna; and he accepted the proposition, bringing his little son with him to blow the fire.

And so he continued to make spears for his new masters, his fame increasing year by year, and his wealth accumulating, until he grew too old and feeble to wield his great stone hammer with such effect as of yore; and his eyes were so blear and dim through the forge-smoke, that he sometimes made mistakes in tempering his work by reason of his inability to see the exact colour of it. But this was no reason why the Tannese should no longer be provided with weapons of the quality they had grown used to. Busy

as the blacksmith was, he had not lost sight of his son's education ; and, if he chose—for by this time he was a well-grown young man—he could forge a spear-head so that you would be puzzled to say that it was not his father's work. But the unfortunate part of the business was, that the young man did *not* choose. He was too proud to be a blacksmith. He was tall and straight and handsome, and loved better to paint his cheeks and stick red feathers in his hair, and to spend his days in smoking and his evenings with the wrestlers and swimmers. While his father was able to control him, he had worked just as little as he was compelled ; but now the poor old fellow had grown feeble, and no longer dared lay a stick across the hot-blooded young fellow's back, the latter did no work at all, except it was cutting a fancy comb out of a bit of tortoise-shell for a sweetheart, or grinding shells to make him ornaments for his hair.

Being unable to beat him for this laziness and frivolity, Asi Winnikeep, his father, would reason with him on picked occasions.

"Thou art nothing but a fool, my son," he would say. "Without doubt it is a pleasant thing to be intimate with the high young men of this place, and pleasanter still to win the smiles of their sisters ; but how will it be presently ?"

"It will be well enough, father, if presently is the same as yesterday ; and so it will be, in spite of all your croaking," answered the undutiful son, lightly.

"Nay, it will not be well enough, nor will presently be as yesterday, if there is anything in rumours," observed the old man, gravely. "Presently there will be war. It may come to-morrow : then how will it be with thee ?"

"Quite well. War will bring me delight, and fill my heart with pride towards my father," said the young man, artfully. "It will be so pleasant to know that the spears that win the victory are the work of your hands. The boldest warrior will not dare brag in my presence, or he will find himself laughed at. 'Pshaw !' I shall say when he shows his trophies ; 'thank us for them ; thank me and my father.'"

"That is very well," replied the old man ; "but how wilt thou get speech with them ? Just now they are free with thee ; but by-and-by it will be different. My son will find the young warriors looking over his head, and crying—'And what does the son of the lame blacksmith know of battles and trophies ? Get thee to thy tongs and bellows, young upstart, and make tools for thy masters.'"

At this young Arri Winnikeep hung his head, and bit his lip till

you would have thought, to look at it, that, as well as his cheeks, it had been painted. But presently he looked up, and laughed his gay laugh, saying—

"What care I what they say, so that when they go to war they leave behind them their pretty sisters? I shall find them pleasant companionship enough, I'll warrant."

"Their sisters will not so much as look on you, my son," said Asi Winnikeep. "As a blacksmith, they will turn their backs to you; as a fine fellow, they will laugh at you, and cry—'Poor Arri Winnikeep! he stays at home lest some warrior should pluck out his heart and discover how white and soft it is!'"

This was a view of the case the thoughtless young man had never before taken; and now that it was put so forcibly before him, its truthfulness he could not for a moment doubt. His gay laugh turned sour in his mouth, and caused his lips to draw tight to his teeth.

"Then," exclaimed he, moodily, "I am no better than a lost man."

"Nay; how will that be, my son?" exclaimed the old man, eager to cheer him. "Thou art a spear-maker, and the son of a spear-maker; and when the war comes, and the young warriors find thee busy at the forge, they will honour thee, and wear their friendship for thee on their bright blades; and though thou art not present on the battle-field, thy name shall be mentioned with respect as they tell over the deeds of the day, and remember the weapons that have served them so well. What then wilt thou care, though the damsels flout thee because thine eyes blink with smoke and there are ashes in thine hair?"

But although Arri Winnikeep listened to the end of his father's speech, he got very little comfort out of it. He only grunted "umph!" and turned away, with his lips still tight and his forehead wrinkled: and no wonder. This war of which his father spoke had been long put off, and must very shortly take place; and then his heart's love, she for whom he sighed so constantly—she for whom he had dived, where other divers more experienced and older than he had clapped their hands, and cried, "He's gone! he's gone!" and all that she might have a necklace of purple shells. She would presently turn from him—if all that his father prophesied came true; and how could he doubt it?—and shrug her shoulders in contempt when he addressed her. She would taunt him as a coward, and turn her back.

"And that I would sooner behold than the face of the handsomest woman in Tanna," sighed the miserable young man as he strolled away disconsolate from his father's shop; "but to know that it was turned to me in contempt!—to be aware that she hid her face from me because

my presence gave her eyes offence!" And in his despair he tore the red feather from his hair, and covered his eyes with his hand, as though the terrible picture stood revealed there before him.

But he was not the kind of young man to long indulge in fruitless lamentation. In a few moments he stooped and picked up the red feather, brushed the dirt from it carefully, and replaced it in his hair; and then, with quite a different expression of countenance, turned towards the forest, and entering it a little way, so as to be out of sight of people passing to and from the village, sat down on a tree-stump, with his arms folded on his breast, to consider if his desperate case might in any way be mended.

"What my father says cannot be denied," he mused. "I can never be a warrior. True, I have no great fancy for the trade of war, and would prefer to keep my head handsomely atop of my shoulders as long as possible; but even if I had a desire to turn warrior, from that course my wretched station shuts me out. I can turn blacksmith, like my stupid old father; but with what advantage? To win the favour of men, and lose the favour of women, and amongst them the woman whom I love more than life itself. Therefore, it is quite clear that I can never become a blacksmith. If my sweet Kiri Moa would have me, I would not care what I became—a blacksmith, or even a grave-digger. But I dare not ask her. Her brothers are rich, and I am poor—miserably, wretchedly poor, with nothing in the world but what my greedy old father chooses to give me. If I were only as he is—the miser!—it might be very different."

And this thought having once got into his head it stuck there. "If I were only as rich as my father—my greedy old father," he kept repeating to himself, until the thought changed in its complexion, and took a more speculative turn: "my father,—my greedy old father, is rich, and I am poor, how can I make myself as rich as my father?"

"He might give all he has to me, and he would if he was half the good-natured fellow people take him for," argued the undutiful fellow. "What does a crooked old stick such as he is want with such a store of spears and arrow-heads? He cannot live much longer, and then I am sure to come in for them, whether he likes it or no. But that cannot happen till he dies, and he is that greedy that I believe if he could die to-morrow he would prefer to live and keep me out of my goods as long as possible. Why don't he die? He's too old to work at the forge, so these Tannese fellows can well spare him, and since he stands in my way I can spare him,—should be very glad to see the last of him. Since, then, nobody wants him, where is the use of his living? If he were to

die at once, I might make such a show of his wealth, as to induce Kiri Moa to marry me instantly, and before the war began."

After this he sat in the dusky wood, thinking and thinking, for fully an hour, and the longer he thought, the harder and more determined his face became, and he shut his lips quite close, as though in fear lest any one of the wicked thoughts he was harbouring might escape in speech. He sat there still another half-hour, and until the dusk of evening fell, and then he emerged from the wood, a murderer all but his hands.

He had performed the cruel deed in his heart over and over again, until he had grown used to it, and could regard it with wide-open eyes, as it were, and be no longer afraid, and, walking straight out of the thicket, he made straight for his father's smithy. It stood away from the huts of the village, because the din of hammering and the smoke was annoying; there was not another hut or any sort of habitation within two hundred yards of it. All but his hands was Arri Winnikeep a murderer when he softly pushed aside the neat door of the smithy, and in five minutes he came out again with not even a hand's-breadth of innocence about him, body or soul. It was a cunning murder and happened exactly as Arri Winnikeep pictured that it would, as he sat brooding in the wood. Behind the forge his father lay dead, and there was blood on the sharp edge of the anvil. No one would mistake the manner of the poor old blacksmith's death. "He has fallen down in a fit and broken his head against the sharp stone," people would say without doubt.

It was quite dark night when the young man had done the wicked deed and crept away from it so that no one saw him. He lodged away from his father's house, and as he slunk to the hut where he slept, he thought to himself, "I wonder who will find his body, and how soon! Somebody will go to-morrow to buy a spear, and then all will be discovered; or perhaps the Nohak priest will be found making fire, and somebody will ask 'For whom do you burn?' and he will answer, 'for old Asi Winnikeep, the spear-maker.' My poor father! The Nohak priest who is so wise and so clever must have known that my father was about to die: why did he not come to him and warn him?" And as the insolent wretch thought this, he laughed half aloud and made a grimace of such contempt, as would have shocked any true believer in Nohak to have witnessed.

But Arri Winnikeep was not a true believer. As before stated, he was of a country where Nohak is unknown, or heard of only to be despised, and though, being no wiser than many good Tannese, he could

not but acknowledge that the Nohak priest was a being to be dreaded on account of the influence popular belief in his mysterious powers conferred on him, he scouted as foolish superstition the idea that the priest carried in that little fiery pot of his the seeds of all manner of disease and the means of death, with ability to save when and where he pleased. Furthermore, he did not believe in the power of the Nohak to divine the manner of a man's death, otherwise he would have paused before he struck that unseen and cowardly blow at his father's head.

"No doubt," laughed he to himself, "the priest of the pot has by this time smelt out that there is death in the town, and is puzzling himself as to where it can be, but no more than a common man will he ever be able to say that my father died by foul means or by whose hand. Since I cannot sleep I will walk out stealthily, and I'll be bound that I shall come on the silly Nohak collecting rubbish to burn, and wondering why it is that my father does not blow his shell."

So he went out into the darkness, and, to his great surprise, just as he was turning a corner, who should he spy on the other side of the way but the Nohak priest himself, with his staff, and his fire burning low in his pot, sauntering with the gait of a man who has no present occupation, and foresees none. "This is strange!" mused the young man; and for an instant the suspicion crossed his mind that he might not have killed his father after all, or indeed have hurt him sufficiently to warrant him in summoning the Nohak; but when he called to mind the tremendous blow he had dealt his father and the dismal groan he uttered as he sank down, he could not doubt as to the result, and uttered a sigh of relief. Only that he was afraid to be caught meddling in so delicate a matter, he would have crossed over, and made a few inquiries of the Nohak priest. As it was, he passed on, keeping in the shadow of the huts, so that he might not be observed, and by a roundabout route found his way back to his hut, and once more flung himself down on his mat with more to perplex and trouble him than before.

As might be expected, he got no sleep; but even had he slept never so soundly, he would certainly have been awakened by the noise of men knocking against the outside of his hut, and calling him by name just at break of day.

"Come out, Arri Winnikeep! get up, oh, most wretched of young men! This is indeed an unhappy day for thee."

"Why so?" answered the hypocrite, putting his head out at the door, and gaping and rubbing his eyes, as though just disturbed from comfortable slumber; "what's the matter?"

"Alas! thy father!"

"What of him? is he ill?" and the young man affected a tone of great alarm.

"Worse: he is dead. While the village slept, Nohak has been busy, and thy father's life has burnt out. But take comfort, my son; it is what must happen one day to us all."

It was an old man who said this, and he was urged to say it the more compassionately because that the young man appeared so completely stunned and overwhelmed by the disastrous intelligence. For a little while he rubbed his eyes, and blinked and stared as though he really could not believe his senses, and still hoped that he might be dreaming; but hearing the words the old man spoke, he presently broke into tears and loud lamentations, and demanded that the Nohak priest might be summoned to explain how it happened that his father had been snatched away without warning. It was not likely that at such a time the priest of Nohak would be far distant — nay, he was at the moment near enough to hear what Arri Winnikeep said, and promptly responded—

"What would the blacksmith's son with the priest of Nohak?"

"That he may explain how it is that my poor father—my good father, whom I loved so much—should have been burnt to death in thy fire without the knowledge of those who would willingly have made sacrifice to save him!—without *my* knowledge. Alas! my dear father! All that that thou possessed—and which undoubtedly is now mine—would I have given couldst thy life have been spared though only till this morning, that I might have kissed thee before thou died!"

"Shall the will of the Nohak gods be questioned?" asked the priest sternly, looking round on those about him. "Shall the Master of Life be questioned when it is his pleasure to dismiss any one of his servants?"

"Nay, nay!" answered the frightened people, bowing their heads in deep humility; while Arri Winnikeep, as though convinced by the good man's words, bowed his head too, and cried, "Alas! alas!"

"But since I may explain, I will," continued the Nohak priest. "I did make thy father's fire, young man; the god of Nohak bade me make it early in the morning of yesterday, and I made it, and it burnt well and mounted high, so that I knew that thy father's hours were numbered. All day long the fire burnt, till night, and then the flames subsided and were presently extinguished, and by that sign I knew that thy father was dead."

While the priest spoke Arri Winnikeep stooped, with his eyes

covered by his hands; but now he looked up, with more than sorrow in his eyes, though those about him, unsuspicious of his wickedness, were unaware of it."

"At what hour did the sacred fire die out, O priest?" he inquired.

"That I can tell thee exactly, my son," answered the Nohak priest, without hesitation. "It was fairly in the middle of the night, and just as the moon rose. There was a momentary darkness when thy father's fire went out, and then the rising moon made all light again."

"Why, that is not five hours since!" cried the villain, wagging his head woefully; "it is indeed hard to be shut out from receiving a father's blessing by so short a time!"

"Nay; glad am I to be able to ease the mind of so dutiful a son on that score," said the priest. "I may tell thee that thy father died blessing thee, and bespeaking prayers for thy prosperity."

Lower still did the murderer bow his head when he heard the priest speak so; but it was not, as the people thought, to hide his grief, but that he might for his relief grin just a little.

"I am indeed all right now," said he to himself. "It is as I always thought. This fellow of the staff and fire-pot is a liar and a cheat; but what care I for that, so that he lies and cheats to my profit!"

(To be continued.)

Trades Connected with Science and Art.

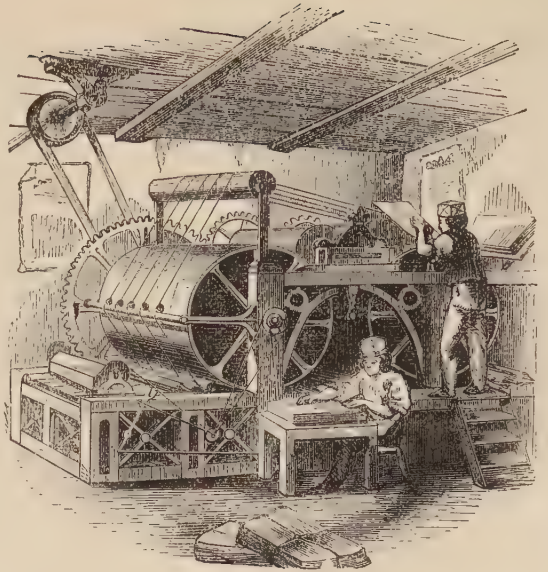
By THOMAS ARCHER.

I.—PRINTING.

IN describing the various tools and the numerous operations of those trades that are directly connected with Science and Art, it is only natural to begin with the business of Printing. Without Printing there would be so few books that neither science nor art could advance, and the greater number of mankind would remain in gross ignorance even of the commonest subjects that are now taught to children in schools.

Before the art of printing was invented, the education of a nobleman in England was far below that of a child at a village day-school in our own day, as far as book-knowledge was concerned. Some of the most powerful Barons could scarcely write their names, and, though a few of the most distinguished understood how to read in monkish Latin, and knew some of the legends and ballads, and were of course well skilled in the use of arms and in the knowledge of woodcraft, and had a smattering of natural history, or of that part of it that could be learned from actual observation, there were few of them who had much learning. In other countries, and especially in ancient Greece and Rome, the want of books was not so severely felt. There were numbers of philosophers who lectured to their pupils in the schools and the theatres, and a great many scribes who wrote out the treatises of their masters on papyrus, on parchment, on waxen and wooden tablets, and later still on a kind of paper. Still the number of books was small, and the books themselves were not of any great length. They may have been *voluminous*, for they were *really volumes* or rolls, the long slips of paper or parchment being fastened together and rolled round a stick with a handle, by which to hold it; sometimes with a stick at each end, so that the reader could hold it before him in both hands, and as he read a

BOOKBINDER'S WORKSHOP.



STEAM PRINTING-MACHINE.

column roll it up and unroll the next. In England the manuscript books were chiefly the work of the monks. Though there was a large number of them, as they were principally legends and books of devotion and copies of the Scriptures, great pains were bestowed on them, so that they were extremely valuable, and never likely to come into the hands of the common people, even if the common people could have read them. These manuscripts, beautifully illuminated in colours and elegantly written, were some of them worth a small fortune, and the only literature that belonged to the common folk was the prayers, the passages of Scripture, the stories, the legends, and the old ballads and songs that they were taught to remember by the priests, clerks or students, jongleurs or wandering minstrels, bards or minstrels of the great houses of the nobility, and a few of the more clever of their own number who had picked up a little learning from the monks and friars.

The first kind of printing was from blocks of wood, in the same way that it is still practised in China, but it is very doubtful whether it was imitiated from the Chinese, for it was not till a century after Marco Polo first visited that country that the plan was first adopted in Europe. In the 15th century (about 1420) these blocks were first used for printing playing-cards and for small books of prayers; afterwards some larger books were produced, but they were small and only printed on one side; and these blocks were very soon superseded by movable letters, which could be used over and over again; so that the work grew, and the common people began, not only to obtain books, but to learn how to read them.

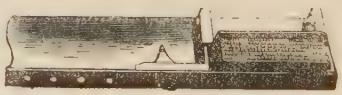
It is very uncertain who first invented the movable types which made such a vast revolution in the world of thought and education. Hundreds of arguments have been fought out to claim the honour of the invention for one of four men—John Gutenberg, of Strasburg; John Fust (or Faust), of Mainz; Peter Schoeffer, of Gernsheim; and Lawrence Coster (or Janszoon), of Haarlem. It would appear, however, that Coster was only one of the early block-printers, of whom there were several in Holland, and that the use of separate letters or types, first of wood and then of metal, as well as the improvements in casting the latter kinds, may be attributed to Gutenberg, Fust, and Schoeffer.

Gutenberg first began to print with movable wooden types some time between 1436 and 1442. This was at Mainz, and there, in 1445, he entered into partnership with Fust, who was a clever typefounder. But Schoeffer, who married Fust's daughter, devised a still further improvement by inventing the punch with which the letter itself was formed at the end of the type. When in 1462 the town of Mainz was stormed by

Adolphus of Nassau, the knowledge of the art of printing was no longer kept secret, but was carried by the workmen to other countries, so that by the end of the year 1530 there were about 200 printing-presses in Europe, about a fifth of the number that there are now in London alone. Before this time, however, several English books had been printed. There lived in the city of Bruges, where he held a very eminent position, one William Caxton, a native of Kent, and afterwards a mercer in London. He was a person of considerable wealth and of very great ntelligence, and in his leisure began to translate a book from the French, by order of Margaret, Duchess of Burgundy, sister of the English king Edward IV. This work was finished in 1471, and was called the "Recueil of the Histories of Troy." A number of manuscript copies were made and sold at a good price, but the demand for the book was so large that Caxton became a little impatient, and, remarkably enough, at that very time a man named Colard Mansion had just begun to introduce the mysterious art of printing into Bruges. Caxton very soon devoted his attention to the new discovery, and himself furnished money for Mansion to set up a printing-office, and the "Recuyell of the Historyes of Troye" was the first English book printed with movable type. The second was a moral treatise, also translated from the French, and called "The Game and Playe of the Chesse." Soon afterwards Caxton returned to England and went earnestly into his new business, at a house called the Almonry (or house for the giving of alms), near the western door of Westminster Abbey. Here he both printed and sold books until his death in 1491, by which time the art of printing had been fully established, and books began to be a more common property of all classes of the people.

The accompanying illustrations will enable the reader to understand the operations of the printing-office with only a short reference to the method of proceeding. The first requisite is of course the "type," or

Type.



Composing-Stick.

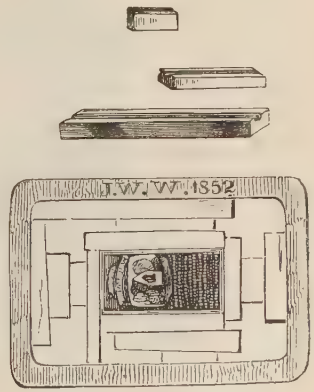
slips of metal containing the letters, figures, and stops requisite for producing a printed page. These are formed of a mixture of metals, the principal of which is lead, and they are cast in a steel mould which shapes the *body* of the type. It is, however, the *face* of the type—which

is the name given to the letter at the end of the slip of metal—which is of the most importance. These letters are formed by steel punches, each of which bears on its surface a single letter of perfect shape and clear outline. These letters are raised just as they appear on the end of the type, and the punch, which is afterwards hardened, is then struck into a sheet of copper, which at once receives the impression of the letter and forms the matrix or mould, which forms, as it were, the bottom of the steel mould, into which the melted metal is poured. When the types leave the mould they are of course all alike, only one letter of the alphabet being cast in the same matrix, and they are all of one size and shape. Letters of one size, shape, and style are called "founts" of type, and the larger, smaller, broader, finer, and more or less antique sorts of letters are known to printers by various names, such as "pica," "bourgeois," "brevier," "minion," &c.

When the types of one casting are taken from the caster, they are joined at the shank by the metal which filled the throat or funnel of the mould, and have to be separated; they are then smoothed on a flat grindstone, a groove is cut in the shank-ends, and all the types belonging to one "fount" or set, are distinguished by one or more grooves or *nicks* on the lower edge of the *body*. By these grooves the *compositor* is able to pick up the types and place them all upright, and with the letters the right way, without looking at them.

When the types are taken to the printing-office, they are distributed in what is called a *case*, which is, in fact, a sort of sloping tray with a

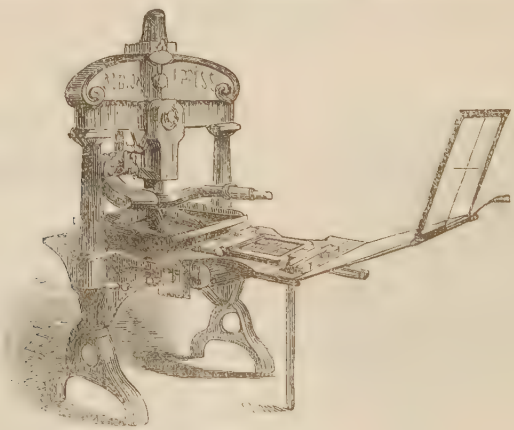
Compositor.



Chase and Furniture.

number of divisions for holding the various letters—a, b, c, d, &c.—with other divisions for the various stops, for *italics*, and for capital letters.

They are not, however, placed in regular order, for some letters occur more frequently than others, the most frequently recurring letter in the English language being e, the next t, the next a, while i, n, o, and s follow in about equal proportions. Before the *case*, which is placed on a kind of high frame, the compositor stands, with the *written* page before him. In one hand he holds a kind of metal trough called the "*composing stick*," the movable end of which is screwed up, so that the space left for the reception of the type is just the width of the page that is to be printed. Suppose a compositor about to "set up" types to form this line: he would take capital S, small u, p, p, o, s, e; then a blank type for the space between the words; then a; then another blank type; then c, o, m, p, o, s, i, t, o, r, and so on as quickly as a hen would pick up grains of barley. It must be remembered, too, that as the types will have to be turned upside down to print the page, they have to be placed backwards, and it is one part of a compositor's business to be able to read the type backwards when it is set up in a page. When the "stick" is full it is transferred to the "bank," where it is kept together and upright by slips of metal in long narrow wooden troughs of the width of the intended page, and when enough is set up to form a sheet—that is, several pages, all of which are printed on one large sheet of paper—the whole of the types are placed on a sort of iron or stone table; formed into pages, which are accurately separated by iron, brass, and wooden slips, blocks, and wedges called "*furniture*;" and the whole inclosed in

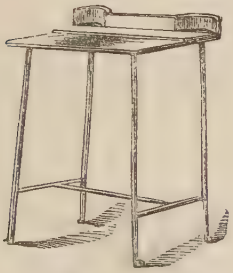


Iron Press.

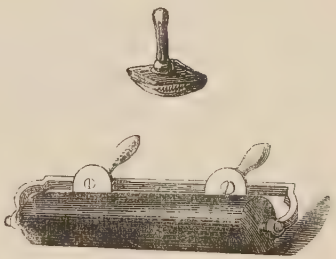
an iron frame known as the "chase." In order to bring the face of the type quite even, it is generally necessary to place a flat block of

wood on it and face it down with a mallet; and when an error is discovered after the page is set, a *bodkin* is used to pick out the type which has been wrongly inserted, and to set another in its place. When the *chase* is filled, an impression is taken by a *hand-press*. The chase, the type being firmly framed in it, is laid on the bed of the press, face upwards, and a roller, made of an india-rubber-like composition, and fitted with two handles, is first made to revolve on a flat table, on which the thick ink has been spread, and is then rolled upon the face of the type.

This process requires considerable practice, as on the proper and even inking of the type greatly depends the completeness of the printing. As soon as the roller has deposited the ink on the letters, a flap containing the sheet of paper is turned over the type, both type and paper



Ink Table.



Roller.

are moved together under the centre of the press, and the action of the lever brings them together with sufficient pressure to print the sheet.

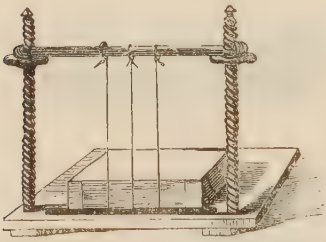
This is called the "proof-sheet," and generally contains some errors. It often happens, too, that alterations are made by the writer when he sees what he has written in print, so that it is usual for printers to print each page separately on slips of paper before making them up in the chase where they are firmly and finally fixed. It is very troublesome to break up the pages and impose them afresh when they are once firmly set in their frame. For the proof-sheets, and for small matters, the hand-press is sufficient; but the printing of books and newspapers is now done almost entirely by steam machinery. There are several sorts of steam presses—some of them working with metal cylinders, which roll the paper over the type; and others, for the printing of large newspapers, where the type itself, as well as the paper, is set round cylinders—but they are the same in principle. It is astonishing to see the great monsters by which above 20,000 large newspapers can be printed in an hour, each sheet being carried along by the machine as fast as it is printed, and deposited on a great stand or stage of timber with the utmost accuracy.

II.—BOOKBINDING.

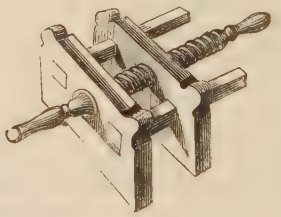
Of course when the sheets are printed on one side, a fresh set of types made into pages in the way already described is ready for printing the opposite side; so that any one not used to it taking up a "sheet" containing several pages, would not be able to make out how they were to be brought right when the book was complete. This is done by folding the sheet; and the letters and figures that you sometimes see at the bottom of the page are the marks of the printer to show how the pages should be arranged, and the sheet folded so as to bring them in their proper order.

The bookbinder has to gather, arrange, and fold the sheets, and when this is done, to fasten them together, and supply them with covers.

There are so many varieties of binding, from the plain cloth covers which are called "boards," to the most elegantly ornamented silk,

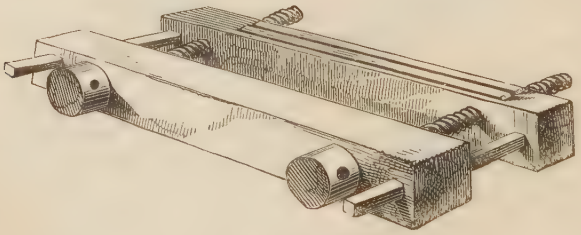


Sewing Press.



Bookbinder's Plough.

velvet, morocco, and even pearl and tortoise-shell, that it would be impossible to describe every process; but in all cases one of the first



Cutting Press.

things to be done is to place the sheets in the "*sewing press.*" If they are to be bound in any superior manner, they are first either beaten

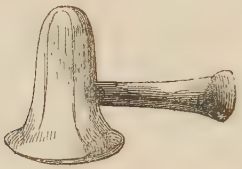
upon a smooth stone, or placed in a powerful press to make them smooth; then each folded sheet is sewn in the "sewing press" to a series of strings called bands. These bands run across the back of the book, where a cleft is often made in the sheets to conceal them. The sheets are next sewn together by what is called a "ketch" stitch here and there, and the bands are cut so as to leave an inch or so projecting on each side. The back is smeared over with melted glue, and is beaten with a hammer until it attains a roundish appearance, and the book is then compressed firmly between two boards, with the back projecting. If it is to be bound, instead of being only in boards, the edges of the sheets are next cut with a "*ploughing machine*," which brings them quite to a smooth surface; the back is then drawn up again, and the boards, which are stout pieces of millboard, are cut to form the covers, and are placed one on each side of the book. The bands, the ends of which are scraped thin, are then put through holes in the outside of the pieces of millboard, and drawn to the inside, where they are firmly glued; then the leather, or whatever covering is to form the outside of the back and covers, is pasted over the millboard. A book is half-bound when only the back and corners are covered with leather, and the covers with paper or cloth.

It is in the finishing and ornamentation of the covers and the back that the art of bookbinding is most conspicuous, and this is done by various "*tools*." The cut edges of the leaves are usually either sprinkled

Tooling Instruments.

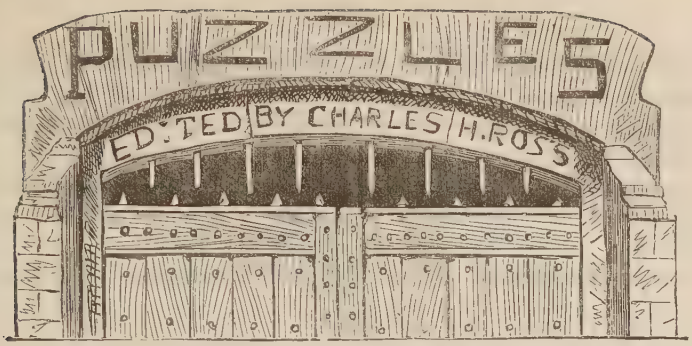
with colour, marbled, or gilded. In gilding, the edges are first coloured with red chalk and water, then moistened with white of egg and water, gilded, and finally burnished with a smooth hard stone. The ornaments on the backs and covers are often made by applying stamps or dies heated in a *stove*. When they are not gilt this process is called "blind tooling." When gold is used the surface of the leather is prepared with parchment-size, white of egg, and fine oil. In ordinary hand-work the patterns are produced by a tool like a disc or wheel,

slightly toothed, and made to run in a handle, or by a number of small dies and engraved rollers, for lines and long narrow patterns. Sometimes the ornaments are made simultaneously by a number of dies placed together in a press, and this process is called "blocking."



Hammer.

Lettering Tool.



1. A Rope Trick.

Take a piece of stout cord and tie a simple knot in the centre; then tie one end round the right leg and the other round the right wrist, tightly, mind, and firm; then untie the centre knot without releasing either leg or arm. How is this done?

2. The Phœnix Epistle.

Request one of the company to write something on a sheet of paper, put it into an envelope, fasten it down, and then tell what is in it, after it has been duly directed and then burnt. Produce a writing case, take the sheet of paper on which the sentence is written, fold it, put it into an envelope, and fasten it down. Take the envelope, and before the eyes of the company direct it thus:—

To his Imperial Majesty,
KING PLUTO,
Fiery Halls,
Inferno.
pp.

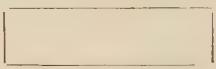
or in any other way you please. And then, after asking some one to burn it and preserve the ashes, leave the room and procure an opera-glass, with which carefully examine the remains of the burnt document, and read the sentence that has been written.

This is the secret of the trick. In the writing case there should be a supply of note paper, a few envelopes all of one pattern, and a pen and ink should be laid ready. Before the feat is introduced one of the envelopes is to be directed as above and a plain sheet of note paper placed inside, and the envelope fastened down. It is left between the leaves of the blotting paper, and when the sentence or letter has been

written, the envelope is directed in the same manner as the first, but, whilst blotting the direction, change the envelopes, and slip the one containing the note under the table, which, being duly secreted, is read at leisure outside, whilst the company are burning the blank side. The opera or magic glass is a ruse only to leave the room and read the note.

3. The Egyptian or Mosaic Puzzle.

Out of three varieties of card, white, red, and black, of these shapes—



the first a perfect triangle, and the rectangle half the depth and twice the length of the triangle (in all about a score pieces of each colour and shape)—produce the most varied design in form and colour.

4. The Growing Vegetable Bouquet.

Take a fair sized globe turnip, care being taken to see that the crown is uninjured, and a slice is cut from the root end, so that the interior pulp can all be scooped out in the same manner that boys make a turnip lantern. It is then suspended by fine wire with the crown downwards. In the centre an ordinary orange carrot is fixed with the crown uppermost. The turnip is filled with a mixture of pure sand and moss well moistened with water, and it must always be kept thoroughly saturated. Water alone will answer the purpose if the carrot can be laced into its place by means of a needle and thread. The interval between the carrot and the outer edge of the turnip should be filled with dry ears of wheat, or barley, or even both of various lengths. Some kinds of dry grasses will also answer the purpose. If well made the basket will now appear like a round basin filled with corn, the upper portion of the carrot appearing like a faded poppy amidst it. It is hung up in a warm place by the wire, kept well moistened, and in a few days the turnip will sprout out, and the feathery leaves of the carrot begin to develop themselves, and each individual grain of corn will send forth a tiny green leaf to add to the beauty of the living bouquet. The leaves of the turnip will twine round its natural basin like an acanthus leaf on a Corinthian capital. If properly attended to it will last for many weeks.

5. Riddle.

I was born in a far-off land, where mighty mountains look over the fertile plains.

Cataracts and mighty rivers nurtured me ; the noble savage was my only companion. Bells rang in my manhood, and flowers were strewn over my habitation. I longed not for other climes and other scenes, yet here I am at Christmastide claiming hospitality at your hands.

You all know me, all use me—some even love me. Sometimes I sweeten the tea you drink, at others give substance to the staff of life. Sometimes I appear in the fiery spirit which leads men to madness, to wretchedness and woe.

Yet I am innocent and pure as the snow flake on your window pane. Though I am humble, and would gladly dwell in a lowly habitation, I sometimes stiffen with pride. Man, ruthless man, is the cause of this. He comes forth with ruthless weapons, casts my dwelling place to the harsh elements, and me upon the cold world, exposed to every blast. Then he makes my grave, and casts me in with rottenness and foul corruption, but yet I do not die.

I survive all, and when I issue forth, stout and robust, full of vigour and life, I am caught in a wily net ere my eyes gladden with the cheering light, and open to meet the glorious sun.

Into the fiery torrent, by a Fury, I am hurled. The pool bubbles round me, and I am hurled hither and thither. Who is this with mighty shield and dread trident who watches over all? Deep into my vitals she plunges the murderous weapon, and then lacerates my skin, crushes me with Amazonian strength, as if nought could satisfy her rage.

Statesmen now extol me. Portrait painters do not disdain my aid. I am possessed of taste, all admit ; my nature is various. Sometimes I am the cause of sloth and disorder, yet I am a blessing sent of Heaven. I feed millions, alleviate misery, but am a prize and prized.

6. Charade.

In my first many contracts are made,
And they are binding reckon'd ;
When Pius was made Pope of Rome
He was then my second.

My whole great reverence pays my first,
He thinks that it will save him,
And 's fit to wish that being curst
Who don't do as he'd have him.

7. Anagram.

I am a fowl in my first state,
And when in pretty good condition

By hundreds I am thought a treat.
Now let me suffer transposition,
Then I am decked with fruits and flowers;
But if you would again transpose
My hated name upon you lowers
When you're beset with deadly foes.
Strike off the head, and may I ne'er
With you, my dear friends, appear.

Rebuses.

8.

Adown my whole when blackbirds sing,
And hail the mild returning spring,
How pleasing 'tis to stray!
Unlike where city slums abound,
In which, beheaded, I am found,
A dark and narrow way.
Now, of my head again bereft,
By just reversing what is left,
You'll have a dreadful cry;
Curtailing this you will display
A measure then, by which you may
Your lace and linen buy.

9.

My boys, define an offspring of the Graces
Which adds fresh beauty to your charming faces:
Decapitate, transpose it, and you'll find
A fruit, and you may taste it if inclined:
Extract one half the heart of this fine fruit,
You'll see the cause of many a high dispute.
All parts restored—cut off the leading letter,
You'll have a measure, and few measures better.
Now, make it one head less, an awful place;
Where sweetest music 's heard, 'twill show its face;
Drop but one letter and transpose, 'tis true
The whole of Britain will appear in view.

10.

Of all enigmas and charades,
In all their shapes and all their shades,
Whate'er the first and second be
The *last* is always found in me.

11.

Cryptograph.

W5mv gõ wvzgs yb h4zmwv 657h g5mt7vh,
Dzh gsv Sv65 gszg sv6v 43vb;
Wvzgs, 3m t7v6w5m 52 sv6 d65mth,
T3evh sv6 2znv, ds3is mvev6 w3vh:
H5 gsv 432v gszg w3vw d3gs hsznv,
43evh 3m wvzgs d3gs t456357h 2znv.
N71S zw5 zy57g m5gs3mt Z1g V H1vmv 111.

12.

Word Squares.

An article of jewellery.
A heathenish image.
A part of the face.
A valley.

13.

An article used for domestic purposes.
A past king of Greece.
An exclamation.
Show.

14.

A sort of cord.
A preposition.
The founder of a colony in N. America.
A lake in Ireland.

15.

A precious stone.
A stick.
A range of mountains.
Smaller.

16.

Dry.
A flower.
An Oxford river.
A writing case.

17.

4, 5, 7, 1 fuel.
3, 7, 1, 2 companion.
9, 7, 3, 4 soldiers' home.
6, 7, 1, an animal.
4, 5, 7, 6 fruit.

My *whole*, a word of ten letters, denotes a virtuous habit.

18.

Use.
A town on the Euxine.
A changer.
A Russian river.
One most earnest.

The *initials* name a heroine who rid the world of my *finals*.

Crimean.

19. I'll fire the canon, G.E.G.
20. A grand roll.
21. Knight in hero's fame.
22. Run! do call!
23. Dracol daring!

24.

My *initials* name a poem written by my *finals*.

A palace.
An Eastern god.
A Persian city.
An Eastern fruit.
A Scotch game.
A poem.
A mark.
A wandering nation.
A Chinese city.
A feature.

25.

I am a word of eight letters, and a very famous statesman.

My 4, 6, 5, 7 is genuine.
My 8, 7, 2, 5, 1 is a celebrated poem.
My 5, 1, 6, 7, 5, 8, 1, 6 is a large town in New Holland.
My 6, 5, 4, 7 is a title.
My 4, 2, 3, 6, is to ascend.

26.

My *first* is the name of my *second*, and my *whole* was a general in the civil war in America.

27.

My *first* is a boy, my *second* a colour reversed, and my *whole* is much used by masons.

28.

Cryptograph.

De dwi ent, nels navi olt duiog-mui ;
De dwi yemls, onn wiondw olt pnwgmui ;
De dwi voau, dwiau voji
Hadw idivlon suoji,
Olt dwi gemn de ti nefit od niag-mui.
De dwi hiddy, onn jniou rauueug ;
De dwi veenagw, dwiau iuueug ;
De dwi nefals gpuadi
O gijmui tinaswd ;
De dwi cionemg wag ehl vongi diuueug.

29.

550 au. A noted archbishop.
506 o. A Latin poet.
2001 on. A noted engineer.
502 ruenog. An Italian painter.
1060 afan. An eminent sculptor.
2000 une. An English monarch.
101 y. A grammarian.
101 see. A mathematician.
1561 oon. A poet and dramatic writer.
52 kew. A Scotch painter.

The *initials* will name a poet.

30. Ye shell press by ye ch.

31. Mother has not catt.

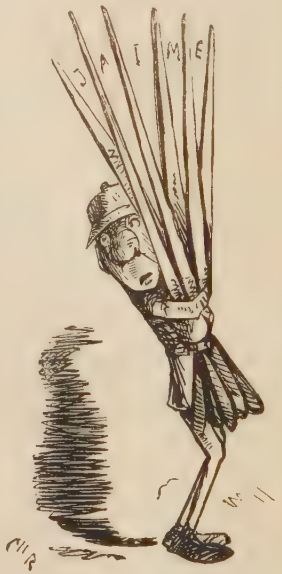
32. Or yet bother us.

33. Laurels made ye gro lict.

34. 100 worw, he's worthy of England.

35. W'nt B.T.H. Zebra, lion, tiger, bear.

Puzzle No. 1.



Puzzle No. 2.

"As we drew near the burning vessel, the flames shot up higher and higher, and the whole sky was illuminated by the glare."

To face page 63

STEPHEN SCUDAMORE THE YOUNGER;

OR,

The Fifteen-Year-Olds.

A STORY OF BOYS' ADVENTURES AT HOME, ON BOARD A PASSENGER SHIP, AND ON THE AUSTRALIAN GOLD-FIELDS.

By ARTHUR LOCKER.

Chapter II.

I go to School at Harlington.—My first Sight of the Sea.—The Burning Ship.—Lempriere House.—Boating and Bathing.—Searching for Gold in Ben Lawers—Manthorpe's Practical Lecture.—A Change in my Career.—Farewell to old Bagshot's.—Preparing for Liverpool.

UP to this time I had been to no school, not even to a day-school, and I had obtained the little book learning which I possessed from the instruction imparted by my father and my mother. I cannot truthfully say that either of them was a very good teacher. My father was wonderfully gentle and patient; but he did not possess the invaluable art of explanation, and he was apt, if the subject interested him, to wander off into regions that were far beyond my reach. My mother, on the other hand, was quick tempered, and easily wearied by dulness and inattention, besides which she was liable to all sorts of domestic interruptions. Just as she was trying to drive into Lucy's head, for example, the difference between a peninsula and an island, Matthew Wise, the gardener, would put his grizzled head in at the door to say that he had set all the cabbage plants, and would mistress come and look at the bed. Then as soon as

she had settled with old Matthew, Nancy would summon my mother into the kitchen for the purpose of discovering what was amiss with the oven, and when she got back into the school-room, after half an hour's absence, she would probably find me and Lucy building a Tower of Babel with our box of bricks, instead of minding our lesson books.

I suppose my father and mother put their heads together, and decided that they were neither of them fitted for teaching their children. So when I was about ten years old, it was settled that Lucy should become a day scholar at the Misses Wells's Select Establishment for Young Ladies, and that I should go to school in the neighbourhood of a seaport town on the south coast. I felt it very hard to part with Lucy, for we had been inseparable playmates ever since we were babies, my elder brothers being too old to consort with me, and we promised to write to each other every other day, which promise we faithfully carried out for the space of one week. At the end of that time I had become less home-sick than I was at first, and had begun to discover such attractions in prisoners' base and peg in the ring, that I did not think about my dear little sister above six times a day; while as for Lucy herself, she discovered a bosom friend at the Misses Wells's Academy, named Clara Ainslie. My mother wrote to tell me that the two girls walked through the village with their arms twined round each others' necks, that Lucy was never easy unless she was having tea with her darling Clara, or her darling Clara was having tea with her, and that, in short, my capricious sister was quite reconciled to the loss of my society.

Until I went to school I had never seen the sea, or indeed any considerable sheet of water. I knew something about ships; for I had been several times on the Thames between London and Gravesend; but I had no conception of that appearance of infinity which is conveyed by the meeting of an illimitable extent of sky and water. My father was a man of a poetical turn of mind, and he was desirous that my first sight of the sea should make such a powerful impression on me that I should never forget it all the rest of my life. With this end in view, he determined, if possible, I should not catch any passing glimpses of the sea from the railway carriage, but that I should see it suddenly all at once in its full majesty. Considering that in most worldly things my worthy father was such a child-like, dreamy man, I think that he managed his innocent little device very cleverly. My first sight of the sea has left an impression on my mind which will never be effaced, though, as the reader will presently perceive, my father little knew how strange a scene he was about to show me.

As we approached Harlington, the town where Dr. Bagshot's school

was situated, several passing views of the sea were visible; but my father sedulously bade me keep my eyes closed, and even gravely tied a pocket-handkerchief over them, to the amusement and surprise of our fellow-passengers. It was now getting towards the evening of a long and beautiful summer's day. We took a fly and drove to the Golden Anchor Hotel, my father bidding the coachman be careful not to let us get a sight of the sea if he could possibly help it. The man stared, but touched his hat civilly, saying if that was the gentleman's wish, he would take him a road by by-lanes and back ways from which not an inch of salt water would be visible. But though my good father made me shut my eyes, he did not bid me shut my nostrils, and I drew in such unmistakable whiffs of sea air, though somewhat defiled with the rank odours of tar and decayed fish, that my imagination, which is greatly stimulated by the nose—for the seat of memory seems to be situated near that organ—began at once to revel in all the maritime stories I had ever read, of ships beleaguered and crushed among mighty bergs of Arctic ice, or becalmed on the glassy waters of the tropics, of cocoa-nut groves growing with their roots in the sea, and of ugly sharks showing their backs in the transparent shallows. Busy with these fancies, I presently found myself at the Golden Anchor Hotel, where my father ordered dinner, and then fell into conversation with a one-armed porter who stood in the hall.

"I want this young gentleman's boxes carried to Dr. Bagshot's."

"Very well, sir; I'll put 'em on my truck at once."

"But we won't go there ourselves till the evening. My boy has never seen the sea. I want him to see it to the best advantage."

"You've come at the wrong time of year for that, sir. We don't often lash our tail in the summer time. In November, young gentleman, you'll sometimes have the salt spray a-dashing in at your garret-windows. But the sea will look pretty to-night, if the weather holds fine. Let me see, the moon rises, sir, half an hour after sunset."

"That will be the time," said my father; "you must come with us, and show us the way to Lempriere House afterwards."

"Ay, ay, sir."

"You've been a sailor, I perceive," said my father.

"For more than forty years, sir."

"Did the French shoot off your arm?" I asked, laying my hand on the old man's empty sleeve.

"No, young gentleman, they didn't," he answered, rather sharply. "I've been in two actions agin the French, and it might have been a feather in my cap to have lost a limb then; but I never got a scratch.

I was with Lord Exmouth at the bombardment of Algiers. The Algerines, though they're cutthroats and pirates, fought bravely; a wound from them would have been an honourable wound; but I never got a scratch. I was at Navarino, when we and the French and the Rooshians went in agin them poor beggars of Turks. There's a good deal of pluck about the Turks; but I never got a scratch. Last of all, in my old age, I must needs go to China, and there, up a bit of a river that nobody at home ever heard tell of, a cussed fellow in a painted paper cap, looking more like a jack-pudding than a soger, lets fly at me with his matchlock; the bullet was as rusty as if it had been kept in a marine store shop for a twelvemonth, and I lost my arm. I call that bad luck, young gentleman—uncommon bad luck."

My father and I laughed afterwards over the enthusiasm of the old seaman, who would rather have parted with his precious limb thirty years sooner to a respectable foe like the French than sacrifice it to a set of mountebanks, such as he deemed the Chinese.

Half an hour after sunset, just before it grew dark enough to light the gas, the one-armed veteran summoned us to accompany him to the sea-shore. Once more my father took the precaution of binding a handkerchief over my eyes, causing me thereby to receive a good deal of misplaced compassion from passers-by in the streets. "Look at that poor blind boy," people said, "and his father leading him." The sea-scent grew stronger and stronger as we quitted the pavement of the town for the round pebbles of the beach. At each step the wind seemed to blow more saltly; then I perceived that the pebbles became smaller, and gradually changed into loose sand, in which I sank up to my ancles. The long roll of the waves on the shore was now distinctly within earshot. Presently the loose sand gave way to firm wet sand, showing that the tide had recently risen so far, and then my father bade me stand still while he uncovered my eyes.

I shall not attempt to convey any impression of the delight which I felt in gazing upon this broad expanse of ocean, over which the moon had just begun to shed a column of glittering white rays. I would rather call attention to the conversation which immediately took place between my father and Hardcastle, our one-armed attendant.

"D'ye see that barque, sir?" said the old seaman, pointing to a vessel which lay within two miles of the shore.

My father was very short-sighted, especially about dusk, so he replied hesitatingly, "Yes."

"I've had my eye on her all the way down the beach. There's something wrong aboard. There! d'ye see that?" he exclaimed.

"Yes, I see it," I answered quickly; "there is a puff of smoke rising up from the deck."

"She's afire, that's what she is," said Hardcastle. "Hey! you two sleepers!" he continued, hailing a couple of beachmen who were lolling idly against a boat, "d'ye see that? There's a job for some of us out yonder."

As he spoke a tongue of red flame darted into the air, illuminating the spars and rigging of the barque, and enabling us to perceive several black figures on board, hurrying to and fro.

The two beachmen, who were just before the very picture of laziness, now became all life and animation, and in a few moments had their boat launched and ready for sea.

My father, usually so dreamy and indolent, astonished me by saying in an excited voice,—

"You must take me with you, my lads!"

The boatmen answered that space was precious, that every inch of room would be needed by the inmates of the burning ship.

"Lor' bless ye!" sneered Mr. Hardcastle, "d'ye think you're the only boat in Harlington? See, there's two more putting out, while you're palavering. There'll be a dozen presently alongside of her."

"I'll give you a couple of guineas," pursued my father, "to take me and my boy with you."

The men still seemed to hesitate. Perhaps they wanted more money, but when my father added that he had been a surgeon, and might be of use on board, they yielded, hastily passed me into the boat, took each an oar, and made over the tiller-ropes to the experienced hand of Hardcastle.

As we drew near the burning vessel, the flames shot up higher and higher, the whole sky was illuminated by the glare, and the moonbeams, which just before had played on the waters with such a cold white radiance, now appeared to be tinged with the stains of blood. Our boatmen pulled with a good will, and, though several other crafts were to be seen putting out from the shore, we were the first to reach the doomed ship. The sea was perfectly calm, almost as calm as the surface of a pond, otherwise I might have been sea-sick, for I had never before set foot in a row-boat. The most adventurous voyage I had ever made was on board of a Gravesend steamer. And yet I think my excitement was too great for sea-sickness. I was unable to utter a word, but I stared with all my eyes, and listened with all my ears to the conversation of my companions.

"It puzzles me why they don't lower a boat," said Hardcastle. "There's two boats aboard, d'ye see?"

"Ay," said one of the boatmen, "there's the long-boat amidships, and the jolly-boat hanging over the poop-bulwarks."

"If they don't look sharp they won't be able to touch the long boat," said the other oarsman. "See, the flames are leaping up all around her!"

"But what," exclaimed Hardcastle, "possesses 'em not to lower the other boat? They must be stark staring mad."

This dialogue took place while there was still a mile of water between us and the ship. I will now describe, as plainly as I can, what I saw when we drew under her stern. Although I was but a little boy at the time, the scene is indelibly imprinted on my memory. Fortunately there was scarcely any wind. What little wind there was blew from the stern of the barque towards her bows, so that the flames, which had apparently broken out amidships, were drifting forwards. The spars of the mainmast were beginning to take fire, the forecastle was hidden by clouds of suffocating smoke, but the after-part of the vessel was as yet untouched by the conflagration. Crowded together at the extreme end of the poop, and leaning over the taffrail, I saw three agonized faces. They were the faces of three women. One was old, swarthy, and weather-beaten; another was quite young and pretty; the third was as old perhaps as my mother. They were all dressed in black foreign-looking clothes. As soon as we approached, these women burst into wailing cries of entreaty. I could understand nothing that they said, for, as my father afterwards told me, they spoke Spanish, and begged us, for the love of God and all His holy saints, to save them from death.

Our two boatmen clambered speedily on board, accompanied by my father, leaving Hardcastle to take care of the boat and me. Just as they got on board a most dreadful harrowing cry, the like of which I had never heard before and have never heard since, burst from the fore-part of the vessel. I then perceived, for the first time, a number of long-eared animals struggling violently in a confused mass. A few seconds later a cloud of smoke hid them from view, the cries grew fainter and fainter, and then altogether ceased. The poor creatures had been suffocated or burnt to death.

In a very few minutes the three women were safely lowered into our boat. But, though they clasped the boatman's knees in token of their thankfulness, they did not appear satisfied. They made the most frantic gesticulations, to imply that there were other persons on board. Unfortunately none of our company understood Spanish. My father, being a learned scholar, could read it with some fluency, and made shift to utter a few words, but he could understand nothing that was said in

reply. Every instant the flames were mounting higher, the smoke was growing more suffocating, the heat was becoming fiercer. Even where we lay, our faces began to feel as if they were being scorched.

"Where are these other people?" shouted Hardcastle, at the top of his voice, in hopes of making the foreigners understand by dint of loud speaking.

The women pointed towards the forepart of the ship.

Our brave fellows shook their heads. "A salamander," they said, "couldn't venture into such a furnace as that, and come back alive."

"How many are there?" asked Hardcastle, holding up his fingers.

The women held up two fingers in reply.

"Two souls still aboard! Bear a hand here," said the old seaman, "and lay her close alongside. In spite of my useless daddle, I'll make shift to climb on deck and look for 'em."

He disappeared for a few minutes, and then came to the bulwarks, shouting for assistance.

"Quick! quick!" he said; "climb up, all on ye, except the women and the boy; we shall need all hands to move 'em—a pair of good-for-nothing grog-swilling scoundrels!"

Our people were only just in time, for the flames were creeping stealthily along the poop, and beginning to lay hold of the mizen rigging. Before long a couple of burly figures, dressed in seamen's jackets, and as insensible as if they had been bales of merchandise, were lowered by ropes into the boat, and we then pulled hastily away from the ship.

All that happened after this appeared to me, when I came to try and think over it, like a confused dream. I remember that several other boats came rowing alongside of us, and that their crews asked us for news in loud, eager, and excited voices; I remember that one of the foreign ladies—I think it was the young one—pressed my hand in a compassionate manner, and laid my head on her knee, for I was beginning to feel dreadfully weary; I remember starting up on seeing an unwonted glare of light, and being just in time to see the mainmast—a mass of red-hot flaming timber—fall crashing over the ship's side; the next thing that I remember after this is, that I found myself in bed, in a strange room, where a man, who looked like my father, was sitting at the open window watching me with a face of extreme concern, and at the same time comforting himself by an occasional whiff from a porcelain pipe.

It was broad daylight, and I felt considerably astonished—indeed my head was quite giddy and confused. By degrees I remembered that I had come to Harlington for the purpose of going to school, and that,

therefore, this was most likely my bedroom at Lempriere House. I began to doubt whether that man by the window could be my father after all. Perhaps he was the head master.

"Are you Dr. Bagshot, sir?" I asked very earnestly.

"Bless me! I hope the child's brain isn't affected," muttered my father, as he laid down his pipe. "No, my dear boy, it's me, your silly old papa—Stephen Scudamore the elder." And he drew near, and kissed me.

"Then where are we now, papa? At Lempriere House?"

"No, my dear. In a bedroom at the Golden Anchor. You've been rather unwell, Steve. The fact is, somebody believed, like a confounded stupid——" My father's face grew red as he said these words.

"I hope I haven't been stupid, papa?"

"No, no, my dear child, not you. Somebody much bigger and older than you, who ought to have been wiser than he was. Mamma will be very angry with him when she hears of it. But we won't say any more about it now. Drink some of this nice lemonade, and go to sleep again."

"Papa," said I, sitting up in my bed, "I don't want to go to sleep again. I don't feel tired, and it's broad daylight. I want to know all about the burning ship, and what became of the three poor ladies."

At these words my father put on a face of the most innocent surprise imaginable. Burning ship? Ladies? What can you be dreaming of? There now," he said, patting my head, "lie down and sleep for one hour more, and I will meanwhile write out for your amusement the story of a ship that I once saw on fire. When you are quite well, you shall read it."

A few days afterwards I had completely recovered, and was taken to Lempriere House. As my father kissed me at parting, he placed a small manuscript in my hand, which he bade me read at my leisure. I could not follow his recommendation literally, for I was unable to decipher his handwriting, so I took it to Dr. Bagshot, and asked his advice. Dr. Bagshot glanced over its pages, said it seemed extremely clever, and observed that as it was on a topic in which we were all just then deeply interested, he would, with my permission, read it aloud to the assembled school next Wednesday evening after tea. Fancy a grave and reverend head master, doctor of Divinity, with three ushers and seventy boys at his beck and call, asking permission of a little chit like me! Of course I granted the permission instantly.

The doctor read my father's composition in a splendidly loud emphatic manner. His power of deciphering such crabbed handwriting seemed to

me miraculous. The boys applauded him lustily, and thereupon christened me "The Literary Dustman," because I was the son of an author. Out of the reams of dry, learned, unreadable treatises which my father has composed during the course of a laborious literary career, this is one of the few which I care to read, because there is some life and human nature in it. He begins by lamenting his own folly:—"With my usual unthinking selfishness," he says, "because a sudden insane curiosity seized me to see a ship on fire close at hand, I must needs take my dear youngest boy Stephen, of the tender age of ten years, in the boat with me. He had never seen the sea till that evening, and the sight of the furious flames and the terror-stricken faces of the women, the roar of the conflagration, and the hideous yells of the dying mules so affected him that he lay for three days after in a sort of stupor. Heaven forgive me! I dared not send for his mother, and, thank God, he is now mending fast, and she shall not know the tale of his father's folly till he is well and strong again."

I need not repeat the whole of my father's manuscript, from which I have already largely borrowed—for it is not likely that my childish ears, unaccustomed to the sound of sea phrases, would have been able to bear away accurately the expressions used by the boatmen and others—but I will just give a brief outline of the story of this ill-fated vessel.

The *Rosabelle*, a British barque of 370 tons, bound from Cadiz to London, anchored, after a remarkably fine passage, in Harlington roads for want of wind. There were four passengers on board—namely, Señor Moreno, his wife, daughter, and servant. The señor was a merchant of Cadiz, and was about to settle in London with his family. The *Rosabelle* carried a valuable cargo, consisting of cork, silver ingots, and some mules of the purest Andalusian breed, for which the señor hoped to obtain high prices in England. As there seemed no chance of a breeze arising to carry the ship towards her destination, and as, in those days, steam-tugs were not so easily procurable as they are at present, Señor Moreno, who had urgent business in London, determined to proceed thither, accompanied by the captain, leaving the ship in charge of the mate, who was ordered to unloose the sails if the least breeze arose. Now, the mate was a gay fellow, fond of the society of ladies, and he remembered, having once before lain at anchor in Harlington roads, that there was a very fascinating barmaid at the Golden Anchor Hotel, to whom, on a former occasion, he had paid his addresses. So, making up his mind that the calm would last for at least one day, he ordered the captain's gig to be manned, and went ashore under pretence of buying some provender for the mules. But the crew saw through his

stratagem, and resolved that, if he went a-pleasuring, they would go a-pleasuring also. They made, therefore, an agreement among themselves that as soon as the mate was safely moored in the bar-parlour of the Golden Anchor, the men who had pulled him to the beach should return on board. They then cast lots to decide which two of the whole number should stay on board to take charge of the ship, after which a spokesman went aft to the ladies, who, poor innocent souls, knew nothing of these cunning contrivances, and informed them, in the best Spanish he could muster, that the mate had ordered all hands ashore, except two, for the purpose of bringing hay on board. The two fellows who were left behind were mightily discontented to think that their comrades were enjoying themselves ashore while they were mewed up on board ship. During the forenoon they had some occupation, for they had to cook their own dinner, and help Señor Moreno's servant to cook the dinner for the ladies; but in the afternoon time began to hang heavily on their hands. They grew tired of pacing up and down the main-deck, smoking their pipes; they grew tired of playing cards on the forecastle; and presently one of them remembered that there was a keg of rum under the main hatchway, which could be easily got at. They determined to take a very small quantity—only a "tot" or two—and accordingly descended into the hold, armed with one of the carpenter's gimlets, a straw, a tin mug, and a lighted candle. They accomplished their theft successfully; but the rum was so deliciously flavoured, and raised their spirits so pleasantly, that they determined to make a second application. This second application led to a third, and that to a fourth, and it was afterwards supposed that, in one of those descents into the hold, one of these fellows, rendered reckless by the spirit he had drunk, left the lighted candle behind him.

About sunset the ladies perceived, by their unsteady gait, that the men were intoxicated, and became very much alarmed. They were unable, however, to do anything. They dared not interfere with the sailors: so they leant over the bulwarks, straining their eyes in the direction of the shore, in hopes of seeing the mate and the rest of the crew coming off in the captain's gig. When the thin blue smoke first began to curl up from the main-hatchway, they ran about the deck, screaming for assistance from the drunken sailors, but could find them nowhere. Hardcastle afterwards discovered the two rascals fast asleep and uninjured under a wet sail, with a can of rum by their side.

It is often said that there is a special providence which watches over drunken men. If this sail had not happened to be saturated with wet, these tipsy revellers would probably have been burnt to death. But

how came the sail to be wet in such calm dry weather? It seems, from the statement which they afterwards made, that these fellows, finding that they were rapidly becoming intoxicated, endeavoured to restore themselves to sobriety by emptying buckets of water on each other's heads, and that, in their clumsy efforts to accomplish this, they drenched the sail and everything about them; so that, in a certain way, one of the consequences of their drunken freak was the means of saving their lives.

Such was the end of an adventure which might have proved a terrible tragedy; but which, fortunately, cost no lives except those of the poor mules. A good deal of the silver, though melted entirely out of its original shape, was afterwards recovered by divers.

I spent four very happy years at Lempriere House; but I shall not trouble the reader with any lengthened account of them, as the incidents which happened to me were very much the same sort of incidents which happen to most healthy boys who are fond of all sorts of out-door amusements, but are not, at the same time, too idle to learn their lessons. Before I was fourteen I had become a fair classical scholar, was well up in the Georgics of Virgil, and could translate a play of Euripides. Dr. Bagshot gave my father a very favourable account of my progress, and recommended that in a year or two I should be transferred to a public school, from which, if I used ordinary diligence, I should be pretty sure of obtaining an excellent scholarship at one of the Universities.

I have always entertained a great regard for "old Bags," as we schoolboys irreverently termed him. He had a pompous, old-fashioned manner until you got to know him pretty well; but he was a capital scholar, and a very kind-hearted man. Besides, he had a genuine fondness for the sea, and everything appertaining to nautical affairs; and I have heard the big fellows say that, if he had not been a parson, he would have made a first-rate man-of-war captain. The school maintained two fine eight-oared boats, on board of which we used to go bathing and fishing, and occasionally on pic-nic excursions to other places on the coast. Old Bags always steered the crack boat, and it was great fun to see him, with his white tie all awry in his enthusiasm, bending his portly body, entreating the rowers to give way, and showing them how to feather their oars, like the jolly young waterman in the ballad, with skill and dexterity. I can't help feeling proud that my first knowledge of the art of rowing was obtained upon salt water, and not upon fresh; and I always entertain a little scorn for those who, however skilful they may be, are mere inland boating men, because I

know how awkward they would be, and how qualmish they would feel, if they had to tug out at sea against a strong breeze of wind.

Our boat carried sails as well as oars, and the doctor used impartially to appoint each boy in succession, who was big enough to undertake it, the duty of attending to the sheets; so that all had an opportunity of learning something. Sometimes, too, he would give a sort of practical nautical lecture on shore. The masts and sails of our two boats were spread out on the lawn, and while we formed a circle around him, our worthy head master would point out the successive uses of each rope, and spar, and block, and sail, questioning his hearers on the subject until they were perfect.

He was very particular, also, in teaching every boy, big or little, to swim, and this was accomplished in a very simple manner. There were several wooden breakwaters along our coast, at the end of which the water was always deep, even at low tide; so that they formed convenient places from which to take a header. On one of these breakwaters might be seen, on any bathing-day, the portly figure of the doctor, holding a stout rope some twenty feet long coiled in his hand. To the other end of this rope was attached a broad flannel belt, which was securely strapped round the learner's waist, and over his shoulders; the boy then jumped into the water, and a few spoken directions, assisted occasionally by a practised swimmer's hand under his chest, soon enabled the novice to acquire the art and mystery of striking out.

I was getting pretty well accustomed to the notion of the peaceable commonplace career which had been chalked out for me by my pastors and masters. From a private school to a public school, from thence to college, from college to a curacy, from a curacy to a rectory—such was the unadventurous prospect which I came to regard with some complacency. And yet there were times when the idea of such a humdrum existence seemed insupportable. In our school library there was a large folio atlas, and after poring over some of its maps—a frequent amusement of mine—I used to feel discontented with Harlington, and England, and civilization. I did not care much about the maps of such thickly-peopled countries as France and Germany,—there were too many towns and villages for my taste; I used to prefer the maps of North America, and especially of Australia. The latter afforded a boundless field for an ardent imagination; for the known parts of that gigantic island formed in those days a mere fringe round the coast, while in the centre there lay a blank space big enough to contain England, Scotland, and Ireland, several times over, which was entirely unexplored.

I was unwilling to believe that this *terra incognita* consisted of nothing but burning deserts of sand : I rather hoped that some future explorer might there discover lofty mountains, higher perhaps than any on the surface of the globe, splendid lakes, and numbers of wild animals differing from all existing species. Perhaps in that mysterious inner region, dwelling on a table-land surrounded by a ring of mountains inaccessible to all mankind except some favoured pioneer, there would be found all those monstrous creatures which peopled the globe ages and ages since, not buried beneath the rocks, or fossilized into stone, but alive and jolly. Fancy the delight of descending the inner slopes of these mountains, and catching sight of a primeval elephant, three times as big as our degenerate modern breed, and covered all over with shaggy hair; or finding a great toad, with a prickly back, as big as a Hereford ox ; or seeing a mastodon crunching a forest of young trees between his massive teeth, as easily as we eat asparagus ; or sending a rifle-bullet clean through the snake-like head of a plesiosaurus ; or "potting" a pterodactyle !

I used to indulge in all these fancies after reading a delightful book of the late Dr. Buckland. My readers are aware by this time that those dreams are never likely to be realized. Since I was a boy nearly all the unknown tracts of the earth—except about the Poles —have been explored, and nothing very startling has been discovered. As for the interior of Australia, it appears to be very much like most other parts of the island—plenty of gum-trees and thickets of scrubs, no high mountains, and a great deficiency of permanent water.

I was about fourteen years of age when the gold discoveries took place in California, and these discoveries made a great impression on my mind. Hitherto gold had seemed to be one of the rarest of substances, and only to be found in countries where it was almost impossible for foreign gold-seekers to penetrate. If a digger, provided with a pick and shovel, had visited the Ural Mountains in hopes of being allowed to search for the precious metal, and to carry away all that he could find, the Russian policemen would very soon have requested him to quit the country, if they did not send him to cool his heels in Siberia ; while as for the west coast of Africa, no man of European blood could stand up to his knees in warm water, washing out minute grains of gold under the poisonous tropical sun. But now a gold region had been discovered in a healthy temperate climate, in a country which belonged to our own Transatlantic cousins, and where everybody was welcome to come and scramble for all he could get.

During the autumn holidays of that year, my father, for a wonder,

made a short trip to Scotland, and took me with him. He went for the purpose of inspecting some antiquarian remains that had lately been discovered, concerning which he was about to write a learned treatise. We visited the Highlands, and as up to that time I had never seen a bigger mountain than Box Hill, in Surrey, I was delighted.

While we were staying at a village on the shores of Loch Tay we fell in with an elderly Scotch minister, to whom my father took a great fancy because he was a zealous antiquary. I also liked him because he told me stories about the rebellion in Canada, where he had served as a chaplain—on the loyalist side, of course—and had received a bullet in his shoulder, which he kept in a little case of shagreen leather, and was very proud of showing to anybody. He gave us an interesting account of the destruction of the steamer *Caroline*, which the rebels captured, set on fire, and then sent blazing down the Falls of Niagara.

But my readers have had enough of burning ships for the present; so I will proceed to tell them something else about this eccentric old minister. He and my father began talking about geology, of which my father knew ten times as much as he did, and the old minister then declared that there was as much gold in the Highlands of Scotland as in California; and that Ben Lawers, the mountain which overlooks Loch Tay, was rich with veins of the precious metal. He pulled several pieces of quartz rock out of his coat-tail pockets, and handed them to my father, pointing triumphantly to certain glittering yellow specks which appeared upon them. My youthful eyes sparkled at the sight, and I instantly formed an idea of buying a tent, pitching it on old Ben Lawers's rugged sides, and living there as a gold-digger till the Michaelmas term began at Lempriere House.

My father took off his short-sighted spectacles, and peered closely and carefully into the quartz-stones which had been handed to him.

"These spots," he presently said quietly, "are only mica—a comparatively worthless substance."

"Pooh! sir," retorted the old minister, quite angrily, as he finished his toddy, "they're naething of the kind. If they're not gold, I'll swallow this toddy-tumbler! Come, laddie," he said, turning to me, "will ye go with me on a gold-exploring expedition?"

I looked with delighted eyes at my father, who immediately gave his consent, though he declined to accompany us, being averse to mountain-climbing.

The next morning we started at daybreak, accompanied by two labouring men, carrying pickaxes, shovels, hammers, and a plentiful

supply of provisions. We wandered about till sundown ; we saw some beautiful views ; we got caught in a mist, which I thought greater fun than my elders did ; we dug several holes and broke up several bits of rock ; we ate and drank all our provisions with an excellent appetite ; but we did not find a particle of gold. As far as I am aware, no gold has been discovered on Ben Lawers up to the present day. Yet I don't think the old minister has ever swallowed his toddy-tumbler, though he has no doubt since emptied it pretty frequently.

When I went back to school I was full of ideas about gold-digging, and confided my thoughts to a crony of mine, who, though a dull fellow at Latin and Greek, was a most ingenious mechanic. Said he, "Although we can't find any gold at Harlington, we'll at least show the other fellows how people dig for it in California." He took out of his play-box an illustrated newspaper containing some drawings of the implements used in the gold-diggings ; he constructed from these drawings a neatly-made "cradle ;" he then obtained from a friend in Portsmouth dockyard a quantity of brass filings, and asked permission of the doctor to be allowed to do what he pleased for a few days in a waste and unfrequented corner of the playground.

Manthorpe, in spite of his ignorance of classics, was a great favourite of the head master's, for he never got into any mischief, and on many occasions he proved himself most useful. It was he who was entrusted with the sole charge of the manufacture of fireworks for the 5th of November, and his rockets flew up as high and burst into as many brilliant sparks as those supplied by the professional makers. It was he who, when the mania for kite-flying sprang up, constructed one of such gigantic proportions that, on a gusty day, it nearly pulled the corpulent doctor off his feet, so that we expected to see him fly off the cliff and sail over to France, clinging to the kite-string. It was he who, upon the occasion of Miss Bagshot's eighteenth birthday—which was kept as a festival—sent up six fire-balloons in succession, on the transparent sides of which balloons, made of many-coloured silver paper, the initials of each of the doctor's children were successively made visible to the cheering crowd of boys below.

To return to our miniature gold-diggings. Manthorpe dug a circular pit about seven feet in depth. At the bottom of this pit he buried his brass-filings, well mixed with a quantity of stiff clay. Assisted by me and by another enthusiast, and being provided with a simple windlass for hoisting out the buckets of wash-dirt, he exhibited the whole process of gold-digging, from the point where the auriferous earth is first reached up to the moment when the golden grains were triumphantly

exhibited, cleansed from all earthy impurities, at the bottom of a tin dish. Manthorpe was so clever in all such matters as these that I always fancied in after years he would become a famous engineer, or at least a popular lecturer at the Royal Polytechnic Institution; instead of which he settled down as a clergyman in a comfortable family living, among the fat and fertile fields of Lincolnshire.

In those days, if I had been asked which of the two—Manthorpe or myself—was most likely to take orders in the Church, I should have betted on the latter, being totally unaware that a storm was gathering which was destined to change my career in life altogether. My brother Alfred, who was ten years older than myself, was the cause of this change. I had never seen much of him, for when I was a baby he was away at a distant boarding-school, and soon afterwards was placed in a merchant's office at Liverpool. He was not a favourite with my father and mother, and he usually spent his holidays with relatives in the north of England. When I became old enough to understand such matters, I learnt from my mother that his conduct was not good, that he had got into debt, and that my father had made himself responsible for his debts.

At length the news came that Alfred had lost his situation, and had quitted England. He never wrote a word to say what had become of him, but, in consequence of his flight, all the creditors came down upon my father, and he was sorely pressed for ready money. I shall not easily forget the day—it was towards the end of the Christmas holidays—when my father sent Lucy to say he wanted to speak to me in the study. I guessed that he must have something important to tell me, for he was not generally in the habit of sending such formal invitations.

I found him sitting over the fire, and thought I had never seen him looking more old, and anxious, and careworn. His porcelain pipe was in his hand, but though he put it every now and then mechanically to his lips, there was no fire in it. "Steve, my boy," he said, as he blinked kindly at me through his spectacles, and held me by the hand, "I had hoped to make a scholar of you. I wanted one of my sons to be a really well-educated man, but it can't be done. I can't afford the money. Your unlucky brother" (here he laid his trembling hand on a heap of bills) "has taken away what should have been your birthright—the right of education. You must begin to earn your bread, Stephen, in a few days' time. Do you feel sorry?"

"I am very sorry for you, father," I answered, "and I shall be sorry to leave old Bagshot, and all the fellows there, and the boating and the bathing; but I shall be glad to be of some use to you. But what can I do to earn my living? I have been taught no trade."

"I have arranged that you shall learn a trade—and a very pleasant, profitable trade it is too, though not so honourable as literature or the Church. How should you like, Steve," said my father, rubbing his hands, "to become a shipowner?"

A shipowner! My face flushed with delight. I instantly thought of a beautiful fore-and-aft schooner which Manthorpe and I had admired as she lay in Harlington roads, and on board of which we had agreed that it would be delightful to make a voyage of discovery among the islands of the Pacific, exchanging knives, and hatchets, and scarlet cloth, for bread-fruit, and hogs, and yams, and cocoa-nuts, and every now and then staying ashore for a month or two at a time in company with such pleasant islanders as Kory-Kory, Marheyo, and Fayaway, whose acquaintance I had recently made in the fascinating pages of Herman Melville. A shipowner must, I thought, be one of the happiest of human beings. He has only to say the word, and his captain and crew are bound to take him to any part of the world he pleases. So, in reply to my father's question, I said, "I should like to become a shipowner very much indeed."

My father's spirits rose when he saw how pleased I seemed to be. He thrust an allumette between the bars of the grate, and lighted his pipe, saying, as he did so,—

"I have made acquaintance with a very kind-hearted, agreeable fellow, who has promised, within the space of five years, to teach you the whole art and mystery of shipowning. Here is his card."

He handed me a card bearing the following inscription :—

HAILES M'GAFFNEY AND CO.,
Shipowners, Insurance Brokers, and Emigration Agents,
154, GOREE PIAZZAS, LIVERPOOL.

"Liverpool?" I said, doubtfully. "Won't it be rather unpleasant to go to the same place as—as——?"

"I know exactly what you mean, my boy," interrupted my father. "You would rather not be where Alfred has misconducted himself. Make yourself easy on that point. Liverpool is a large place. Mr. M'Gaffney never heard of Alfred, and has no acquaintance with the firm in whose counting-house Alfred used to be."

"And how soon do you wish me to go?" I asked.

"The sooner the better, Steve. Within a week, if mamma can get your things ready. Now that I know you wish to be a shipowner, I need delay no longer paying Mr. M'Gaffney the premium."

I had a long talk with my mother after this. She was more worldly-wise than my father, and not so sanguine of my success as he was.

"I scarcely know what to say, my dear Stephen," she said. "Your papa has acted very hastily. He made Mr. M'Gaffney's acquaintance at a hotel, I believe, and he did not take the advice of any of his former Liverpool friends. He could not bear to visit them, he says, because of Alfred's misconduct."

"Papa talked about paying a premium: what does that mean, mother?"

"It means a sum of money which Mr. M'Gaffney expects for the privilege of allowing you to come into his office, besides which we are to pay him for your board and lodging. The premium alone will be a hundred pounds."

"A hundred pounds? Why, I had better stay at old Bagshot's."

"That is quite true, my dear, if you only look at the present time. The first year in Liverpool will cost more than a year at Lempriere House; but then Mr. M'Gaffney promises to give you a salary on the 1st of January next, if your conduct is good."

"A salary? Oh, won't that be jolly! I have never earned a half-penny yet since I was born. I shall buy something for you, mother, and something for Lucy, and something for—— But how," said I, interrupting myself, "will papa manage to pay this hundred pounds?"

"His publishers have kindly undertaken to advance the money."

"Oh! mother, what an expensive little wretch I am! But I hope to make it all up by-and-by. Just fancy what nice things I shall be able to send home when I am a shipowner! I shall bring you an Indian shawl, and Lucy a bracelet; then I shall get a Turkey carpet for the drawing-room, and for Nancy—oh! what shall I buy for Nancy? Oh! I know!—a pot of preserved ginger."

I was sorry to leave Lempriere House without even bidding the Doctor and all the fellows good-bye; but it was not worth while to make a journey there just for that purpose. My little stock of school books was sent home in a parcel, and when I opened those inky, disgraced volumes, and remembered that perhaps I should never have the opportunity of reading them again, I forgot all the pains and worry they had given me, and actually began to shed tears. The Doctor wrote me a long letter full of classical allusions, regretting that I had deserted the fount of Helicon for the busy mart of Corinth, but hoping that I might find in the waters of the latter place a veritable Pactolus.

A few days afterwards I bade everybody good-bye, and started with an anxious, and yet an eagerly expectant heart, for Liverpool.

(*To be continued.*)

On the Editing of a Boys' Magazine.

THE gradual, and now almost universal, spread of education in our country has unquestionably fixed upon the instructors of youth a duty which requires no small share of sagacity and honesty of purpose to deal with effectively. And this is the more especially so, when the fact, which is patent to every true friend of the rising generation, is remembered, that there are amongst us men of ability whose talents are engaged in the dissemination of sensational literature and crude opinions highly injurious to healthy training, and indisputably destructive of the opening germs of the youthful mind. The discharge of such a duty in a proper manner, under such circumstances, is sufficient to make well-qualified and conscientious men *hesitate* as to the best course to pursue; but, whilst the true lover of his country and his countrymen's children may thus pause in doubt as to the best mode of effecting his object, the necessity of the case impels him to action, so that he may be enabled, by the most simple means, to check the growing evil.

It is not now as it once was, when any kind of system, or no system at all, was regarded as sufficient to "teach the young idea how to shoot." In almost every department of tuition,—from the initiatory table of numeration to the working of abstruse mathematical problems,—from the simple A B C of our language to the finished work of the English student, vast progress has been made; and where we once found the young—especially among the less favoured classes—ignorant even of first principles, knowledge of a certain kind has now so far increased, that the strongest mental "meat" is as readily digested by the youthful mind, in our schools and institutions, as was the "milk" of former days, then sparingly supplied for their early nurture.

The work, therefore, of editing a book for boys is now both a responsible and a difficult task ; especially when we bear in mind that the soil we seek to cultivate has been, to a great extent, interfered with and deteriorated previously. Cotton has well said that "Ignorance is a blank sheet, upon which we may write ;" but that "Error is a scribbled one, on which we must first erase." The *material* with which the instructor has to deal in the present day, though youthful in regard of age, is, in the majority of instances, matured in growth. The tender intellect has been forced ; and the mind, strained by false conceptions and unsubstantial speculations, has, by an unnatural growth, reached an unhealthy maturity, in which dogged obstinacy and self-will are far more apparent than the trusting confidence in the painstaking tutor, which alone can insure the safe progress of the pupil. It is the force and power of these and other similar circumstances which cause the difficulties of the task of the editor of a magazine for boys : the best way of counteracting them should therefore be regarded as the main question upon which we have now to enter.

Upon viewing the matter from this stand-point, the idea strikes us that a magazine for boys should possess the following amongst other characteristics :—1st, *Attractiveness ;* and 2nd, *Utility.*

First, Attractiveness. — And under this head let it be always remembered, that whilst pictorial embellishment, well executed, is calculated both to please the eye and captivate and improve the taste, such work badly done, and merely meretriciously ornamental, must prove decidedly injurious. In all cases, the greatest possible care should be taken not to overdo even the best, for excess in anything is an evil. Where the object sought to be gained is a good one, it is but of little importance in what way the information fit for the culture of youth, both mentally and physically, is distributed. And here we have clear ground, notwithstanding the pre-existing evils to which we have previously alluded. It matters not whether the truth be conveyed through the medium of fiction or fact,—the truth is there still. But in all compositions, and in every illustration, there should be a lightness of style and a simplicity of mode which will reach the fancy and touch the heart of the youth ; and when once the heart is gained, and the fancy amused, the accomplishment of the object will not be far distant. Poetry, too, well written, chaste, and vigorous, appealing to the nobler part of the boys' nature, and urging them on to achieve deeds of "labour and of skill," should not be forgotten ; for the conveyance of the pure principles of philanthropy and patriotism through the medium of the measured line, or the harmony of verse, invariably sinks into the memory, and

proves a counteracting antidote to the poison which lurks in ill-adapted and mischievous literature. Well-constructed but not too hard riddles, such as enigmas, charades, &c., are of no small service in the instruction of boys. Conundrums are frequently mere clap-traps, requiring but little mental labour, as they generally are founded upon some chance idea of the writer or the peculiarity of his constitution, rarely repaying the time lost in their solution, and far more rarely still, affording the young either pleasure or useful knowledge when found out. But with other descriptions of riddles this is not so when they are well arranged. The solution, in such cases, demands frequent reference to the dictionary for the exact meaning of words; to the records of history for the date of events and the names of celebrated men; to the animal economy for the habits of the brute creation; and to the imagination and the wit of the youthful inquirer. Nor is this all. The knowledge gained is often very valuable; the mind becomes interested; and however irksome the labour of search might prove under other circumstances, the very act of research itself becomes pleasant, whilst the happiness which accompanies success in discovering the meaning of the writer is scarcely conceivable to those who have never tried the experiment.

Another mode of rendering a boys' book attractive, is by meeting boys on their own ground, and entering heartily with them into their own games. Too often in days gone by, literature for boys was adult literature merely, and therefore, being unsuitable, the boys received it with aversion and forsook it in despair, blending with its pursuit all the associations of the desk and the rule of the school-room, too frequently made onerous to them by strait-laced and rigorous discipline. That, however, is a mistake, which we hold it to be the editor of a boys' magazine to rectify, by a prudent recognition of the rights of boys, *as boys*, to innocent amusements and juvenile pastimes. The whole of the games of boys may require revision, and if they could be reduced to something in the shape of system,—generously interwoven and ingeniously introduced into their practice,—valuable results would undoubtedly ensue. At all events, the hint may be useful to the conductor of a boys' magazine, and it is with this idea alone that the writer introduces it into his essay.

Doubtless there are many other ways in which a magazine for boys might be rendered attractive, but in this short paper we have not space to refer to them; besides, it is not necessary that we should do so, as the editor himself is far more able than we are, to enlarge upon the subject.

Secondly, Utility.—This would, as a matter of course, be the prin-

cipal aim of the editor of a magazine for boys,—such an editor as we picture at least,—who would have at heart the welfare of his young *protégés*, both in time and eternity. One thing, however, we may notice under this head, very particularly, as more especially as having regard to the improvement of boys in our large cities and towns,—we allude to the almost utter absence of information which at present exists with reference to the especial history, the usages, and customs of the places in which they have been brought up. It is, indeed, something like a startling fact, that even in London, the metropolis of the empire, the great mart of commerce, the most renowned of our English cities, with all its ancient prestige and civic importance, there is no school within its extensive area where any part of the scheme of youthful tuition affords a special study of, or systematic examination into, the peculiar history, customs, or usages of ancient days, or, provides instruction as to the present duties, rights, and privileges of its citizens! Now this we contend is a mistake—a very great oversight indeed. We know more; it is a great evil. How often it has happened that men who by their industry and perseverance have been elected to fill our corporate offices—some indeed of the principal offices belonging to the civic body—men appointed to watch over the ancient immunities of the citizens, and to legislate for them in "Common Council assembled" (for the Corporation of the City of London is not only a *representative* but a *legislative* assembly), who have had to deplore their utter ignorance of the constitution of their own body, or the text of the *Inspeximus* charter of Charles the Second, in which the substance of the charters of the citizens is set forth! And so it is no doubt with other large cities and boroughs, the local histories of which ought to be made familiar as "household words" in the mouths of the rising generation in these days, when rapid progress seems ready to sweep away the ancient rights for which our ancestors paid so dearly both in blood and treasure. Now here, it is thought, there is something like new ground for the editor of a boys' magazine—ground which might, probably, be very usefully and wisely occupied. Let a series of papers, embracing such topics as these, be well, carefully, and pleasingly written, and what young citizen or yeoman would not embrace the information they might contain with pleasure, and read the records of early days with avidity and delight? There are, undoubtedly, now hidden by age and covered by the dust of ages, many tales of chivalry and records of valiant deeds, of self-sacrifice made by our ancestors, even in connection with our own homes and hearths, which still lie neglected and unexplored; whilst the histories of many men once unknown to fame,

but hereafter filling the highest seats among our municipal governors, might be dug out of the dust, and be the means of warming the hearts of our boys, and inciting them to "go and do likewise." Nor alone, as boys, would they be amused and improved by the perusal; for when they reached the years of manhood, and became qualified by position and industry to receive the support of their fellow-men in their candidature for civic or civil offices, they would appear as citizens worthy of the important trust, and capable of maintaining and preserving the rights, privileges, and immunities of their fellow-men—rights which, by their solemn affirmation, our rulers undertake to see preserved inviolate, and thus to hand them down unimpaired "from generation to generation."

Far Away in the Frozen Seas;

OR,

A STORY OF A WHALING EXPEDITION.

CHAPTER II.

HOPE DEFERRED.

MONTH after month passed away, and Mrs. Griffin prayed unceasingly for her husband's health and safety, and speedy return; but the days seemed to creep along so slowly that her heart grew very heavy as she waited, with sorrowful impatience, for the time to come round when the whalers usually came in. Wild dreams of raging storms and crashing icebergs often made her start up in terror from her pillow; and even in the daytime boding fear would often gain the mastery, and leave her no peace till she could once more cast her burden on the Lord.

Robert, however, was always light-hearted and merry. Not that he forgot his father, for, indeed, he was hardly ever absent from his mind; but he never thought of him like his mother, with sorrow and anxiety. He perfectly devoured every book he could get to read about the Arctic regions, and tried to familiarize himself with the whole subject. He associated his father with everything, and delighted to picture him conquering all obstacles by his bold determination, and either avoiding or getting safely through all dangers by his skilful and practised seamanship.

He often went to see Captain Becker, who had had great experience in the whale-fishery, his father had told him; and from his lips he

learned much that could not be found in books. Captain Becker was always glad to have a chat with the boy; for he felt he owed the father a deep debt of gratitude, and he liked Robert, too, for his own sake. His cheerful, frank, lively manner made him a welcome visitor during his long confinement to the house,—for he was laid up for many weeks; and he took great delight in telling him about all he himself had met with in his Polar voyages. When he was able to get out again, he made him the constant companion of his walks, and evidently found pleasure in his youthful inquiring mind. He used to saunter about the harbour with him, and often go on board ships to make him thoroughly acquainted with every part; and in this way added practical knowledge to the theoretical teaching he had already received from his father, till in the end Robert actually knew as much about nautical matters as if he had been several years at sea already.

As the time gradually drew on for the return of the whalers that had sailed in the spring, when one after the other would come in with a heavy cargo of train-oil and whalebone, the visits of the two inseparable friends became more frequent, and almost daily they made inquiry of some of the old captains on the newly-arrived ships whether they had fallen in, on their voyage, with Captain Griffin and the *Eleanor*. But though they never failed to obtain an answer, as Captain Becker knew nearly all the whale-fishers personally, the information received was of the scantiest character. One and another had seen the brig *Eleanor* at a distance; but nobody had spoken with Captain Griffin.

"But that need not make you uneasy," said Captain Becker to Robert. "The Polar Sea is of vast extent, and your father is a bold sailor. It is possible he has pushed further north than the other vessels; and this seems doubly likely as so few have seen him, and he is so much behind all the rest in coming in. I dare say he will be among the last, if not quite the last, that arrives; but he is quite sure to bring a most valuable freight with him."

Robert was completely reassured by Captain Becker's opinion; but his mother could not feel equally easy at the long delay, and she became increasingly anxious as the season advanced. Even Captain Becker began to look grave when the arrivals got fewer and fewer, and sometimes many days would pass before the oily, shining deck of another whaler would come in sight.

At length, in December, the last vessel from the Polar Sea ran in, and she had scarcely dropped anchor when Captain Becker and Robert came alongside in a boat, and leaped up the ladder on deck.

"Who is the captain?" asked Becker.

"Captain Carter."

"Ah! my old friend Carter. He will be right glad to see us, Robert."

They soon hunted him up, and found not only a hearty welcome ready for them, but what was better still, tidings of the *Eleanor*. Captain Carter had fallen in with her far up in the north, near Cape Thackeray, just as he had commenced the homeward voyage. He had even exchanged a few words with Captain Griffin through the speaking-trumpet, and learnt that his intention was to follow in a week at latest.

"His ship was already pretty well filled," he continued; "but he could still manage to stow away another fish or two, and he was hoping every minute to come upon them."

"And didn't you try and induce him to join you, Carter?" asked Captain Becker.

"You may be quite sure I did that," was the reply; "but you know Griffin of old. What he once takes in his head, he will do, and nobody can turn him from it. Besides, the weather was fine, in spite of the lateness of the season; so I wished him God speed and sailed south, while he cruised about still further."

"And what sort of weather did you have subsequently, Carter?"

"Well, it was so bad, that it was with the utmost difficulty I managed to get out into the open sea. We were one time quite blocked in among the floating ice, and we should likely enough be there now if a strong nor'-easter had not set us free."

"That doesn't look well," said Captain Becker, shaking his head. "I only hope Griffin has not delayed too long. He is really often too foolhardy."

"We must just wait patiently, Becker," replied Captain Carter. "I need not tell you how changeable the winds and currents are up in the north, and on what completely unlooked-for occurrences the weal or woe of a ship may depend. While I was stuck fast in the ice, Griffin might have been sailing along with a fair wind in good open water; so let us hope he will be here in a day or two."

There was no help for it: nothing could be done but hope and wait. Robert told his mother all Captain Carter had reported, and tried to make her look at the favourable side of the case; as this much, at least, was certain, that when her husband was last seen both he and his ship were in the best possible condition. Certainly, a considerable time had elapsed since then; for Captain Carter had been detained on the voyage by special business for several weeks; still Mrs. Griffin's poor

troubled heart could not but take some little comfort, and for a while she allowed herself to believe he was well, and would speedily return.

However, when the whole month of December went by and brought no further tidings of the *Eleanor*, Mrs. Griffin broke down completely, and lost all hope. She wept many a tear over her husband, and told Robert that she was convinced his father's ship was lost, and that they would never see him home again.

Robert knew not what to answer; but Captain Becker, who had entered the room while she was speaking, came to his help, and said—

"Don't despair too soon, ma'am, and keep your tears back a bit yet. We really have no reason to be alarmed at present. Ships have been frozen in up in the Polar Seas before now; but it does not at all follow that they have gone down with every-man-jack on board. No; indeed, no! and as far as my friend Griffin and the *Eleanor* are concerned, we may be pretty easy. Griffin is no novice; he understands thoroughly all the resources of the region: and the *Eleanor* was fitted out by myself, madam. I can vouch for her, that she has everything on board a reasonable man could wish. Even if we take for granted she is frozen in, and must lie there at anchor all the winter among the ice, there is no great danger in that. They have provisions enough; and if they had not, they have whale-blubber enough to keep them alive for years. Certainly an Arctic winter is not particularly agreeable; but, with a good ship and plenty to eat, a strong, brave man can manage to get through it: and I am sure Captain Griffin is that, if anybody is."

"But suppose his ship has got crushed among the ice, and gone down, or been buried under some iceberg?" said Mrs. Griffin, with tears in her eyes.

"But who says it is?" rejoined Captain Becker, earnestly. "Why should we immediately think the worst? Why not rather hope the best as long as possible? You must try to fight against these gloomy forebodings, madam. Captain Griffin is every inch a sailor, and we may trust to his experience and determination and oft-tried skill. What is the good of frightening yourself unnecessarily? If we live, we shall see our friend come back safe and sound some time next summer, and then we will all rejoice and thank God. Till then we may surely trust His almighty protection."

His words succeeded in calming Mrs. Griffin a little, and inspiring her once more with hope. She was far quieter when he went away; and a feeling of patient resignation crept over the whole household, and prepared them for their long weeks of sorrowful waiting.

Summer seemed as if it would never come, but it drew on at last, and once more the whalers began to go out. Captain Becker and Robert resumed their daily wanderings about the harbour, watching for the *Eleanor* or trying to get some information about her. But all in vain: the summer slipped away, and the days grew shorter and shorter. The ships returned one after another, and the first snow fell; but still not a sight of the *Eleanor*, and no tidings of her. Poor Mrs. Griffin lost all hope, and almost despaired. Often and often she bewailed her husband as dead; and Captain Becker could hardly manage to keep her up at all, though he exhausted all his ingenuity in discovering sources of consolation.

"I grant," he said to her one day, when the wintry storm was raging without, and rattling against the windows. "I grant that there is some ground for apprehension, now that a second summer has gone and not brought back our friend. But I will never give in that we have any right to lose each and all hope. There are numberless possibilities which may have delayed the captain's return. Perhaps the summer has not been warm enough to melt the ice and set the ship free; or perhaps Captain Griffin has left the ship altogether, and gone over the ice to find a settlement of Greenlanders or Esquimaux, where he will pass the winter. Or perhaps—but there, there's no end of peradventures which ought to make us hope still, or, any rate, not despair; but have patience to wait a little longer."

"But is there nothing better still that we can do?" asked Robert, who had been listening silently, as if deep in thought. "What if my father should have lost his ship, and only managed to save himself and his crew alive? That is a possibility, too, that cannot be overlooked. He may be at this moment struggling with cold and hunger on some icy waste, without a ship or any means of transit to a warmer region; and perhaps the only thing that keeps him from sinking is the hope that our love may impel us to come to his deliverance. Oh, mother, suppose it were so! I can't rest for thinking of it, and it seems as if I could see my father stretching out his hands and calling me to come. Mother, we must do something. I should never cease to reproach myself if we were to fold our hands and sit idle."

"By Heavens! the boy is right!" exclaimed Captain Becker; and fresh hope began to kindle in the eye of the anxious mother. "Yes, that is certainly a possibility that is worth considering. Thank God, you are rich enough not to mind the cost, and I should indeed be a sorry friend if I were not prepared to do my utmost for Griffin. You buy a ship, madam, and I will fit it out and take the command. As

soon as spring comes we'll set to work, and I will not rest till I have explored the whole Polar Sea and hunted up my old friend. It is a mere debt of gratitude on my part; for if Griffin had not helped me in the hour of need, he would probably never have dreamt of going on a whaling expedition. That's settled then, ma'am. In the very beginning of the season, I start off in search of Griffin, and, with God's help, I'll find him."

"And I go too, of course, Captain Becker," said Robert, full of life and ardour, with beaming eyes and glowing cheeks. "Oh, what joy and happiness it would be to find father, and be the means of saving his life or delivering him from want and misery. Mother, you cannot hinder me—you would not wish to hinder me. Surely, if it is any one's duty to go in search of him, it is mine! I am his own son."

Mrs. Griffin sat silently; for a fierce struggle was going on in her mind. She would joyfully have made the greatest sacrifice for her husband's help; but was she to expose her son to the same terrible dangers which had perhaps cost his father's life? "No, no, no!" cried the mother's heart within her; while, on the other hand, conscience asked, Was it not an actual duty laid upon Robert? He was no child now; but a vigorous young man, full of fire and resolution, quite equal to brave dangers and overcome obstacles. His heart was in it, and he had a noble end in view.

At length she conquered the natural weakness that sorely opposed the project, and, with a trembling voice she said, laying both her hands on his head—

"Go, then, my son, and the Lord God be with you! No! I cannot forbid you, or keep you back; for it is your father who is at stake. God will strengthen me, and help me to bear your absence. He will have pity on me, and not deprive me of my son and my husband too. Go, my child; and you will take care of him, Captain Becker, and keep him out of danger. You are a true friend, and I can trust you with my boy."

"That you can, madam, and that you must," said the simple-hearted sailor. "I take my oath to you I will watch over him as the apple of my eye, and no harm shall come to him if human power can help it. I am right glad that Robert is not content to sit idly at home, and see other people go to his father's rescue. I should have been much deceived in him if he had been. He is doing his duty, and that's enough to silence all objections. Yes, Robert, you and I will start as soon as the season permits, and I have a presentiment we shall not

have our sail for nothing. Keep up your heart, Mrs. Griffin. God will be with us, and guide our way."

"I hope and trust He may," she said, with quiet resignation. "We are all in His hands; His will be done!"

CHAPTER III.

AWAY TO THE NORTH.

CAPTAIN BECKER commenced forthwith the necessary preparations for the voyage, and Mrs. Griffin liberally supplied him with the means. She did not need to care for expense, for she was rich enough, but in any case she would gladly have given her last shilling.

Captain Becker's first business was to buy the most suitable ship he could find, and then to fit her out with all that could possibly be wanted. The ship he selected was not large, for a small one is more manageable and also better suited for the peculiar dangers of the Arctic seas, but her build was unusually strong. The hull was literally double to enable it to withstand the pressure of the huge blocks of ice, and on the outside it was ribbed with iron. It had double decks and a between layer of tarred felt to make it perfectly water-tight. The inside was coated with cork to keep out the icy cold as much as possible. Indeed, it was altogether as thoroughly fitted up as human skill and foresight combined with knowledge gained from actual experience could possibly do it.

The lading of the ship consisted principally of the fur skins and necessary wraps to protect the crew from the cold, and of air-tight tin cases, filled with carefully cooked provisions. In the victualling of the ship especially, and in the purchase of everything that would tend to ward off the fearful scourge of scurvy, Captain Becker spared no cost, for well he knew that the health of his men depended on it.

"Don't be amazed, Mrs. Griffin," he said one day, "at the enormous stock of food we are laying in. It is quite possible, indeed, highly probable, that we may be obliged to pass the whole winter in the Arctic seas, and we must be prepared for it. Besides, the provisions in those tin cases keep good for years, always just as fresh as the day they were cooked; and if we find out our friend Griffin I am sure he'll be only too glad to get them, for I doubt much whether he has been able to procure vegetables enough so near the North Pole, to keep his men from scurvy.

He may not stand in need of meat, but broad beans and cabbages don't grow on the polar ice."

"Oh, by all means go on buying, Captain Becker," replied Mrs. Griffin eagerly. "My only desire is that you should consider my purse entirely at your service, for, thank God, I have abundance. Take twice or three times the quantity of stores you require, it will only make me the more satisfied to let Robert go with you."

Captain Becker faithfully obeyed her injunctions, and by the time spring came, with its soft breezes, the *Hope*—for it was so christened by Mrs. Griffin—lay ready to sail, and had stores enough on board to last three or four years, if necessary. Captain Becker was full of calm, confident expectation, and even Mrs. Griffin began to feel some renewal of hope and courage. Though her heart was bleeding and her tears fell in torrents, she was able to part with her beloved boy with more composure and firmness than she had expected. She kissed him fondly, and gave him her blessing, and then solemnly committed him to Captain Becker, who received the trust with simple, earnest, reassuring words. A few minutes later, and Robert tore himself away with one last farewell to his mother and sister Lucy, and followed Captain Becker to the harbour, where a boat was lying waiting to take them on board the *Hope*. His mother and sister had wished to accompany him, as they had his father, but the captain would not consent, as he considered it would only renew the pain of parting, so he and Robert went quietly alone, wending their way through the busy crowds that always throng the streets of New York.

"Well, Robert, that's one business over," said Captain Becker, as they stood together on the deck of the *Hope*, "and I assure you it is by no means the easiest part of the work that awaits us. It is hard to say 'Good-bye!' But cheer up, my boy; we are in the right way—the way of sacred duty, and we may be sure the Almighty will be everywhere with us. A brave heart, Robert! This shall be our motto, and we shall have strength and patience for every condition and circumstance, however critical. I do not conceal from you, Robert, and never have concealed from you, that it is likely—ay, even certain—that we shall have to undergo great toil and suffering, and that dangers lie before us which cannot be averted by any human skill or foresight. Only God can help us and shield us with his strong hand. I therefore think it my duty to ask you once more whether you are really prepared for all this, and whether you are ready joyfully to run the risk of shipwreck, or even death, to save your father. There is time even now to draw back; yonder lies the little boat rocking to and fro, and in five minutes you

may be safely landed on the shore. So, if you in the least regret your decision, make up your mind while there is the chance."

"Oh! captain," exclaimed Robert, with a reproachful look, "how can you suspect me of such cowardice? Look at the crew—they are ready to risk their lives for a few pounds; and is it for me to be afraid to draw back?"

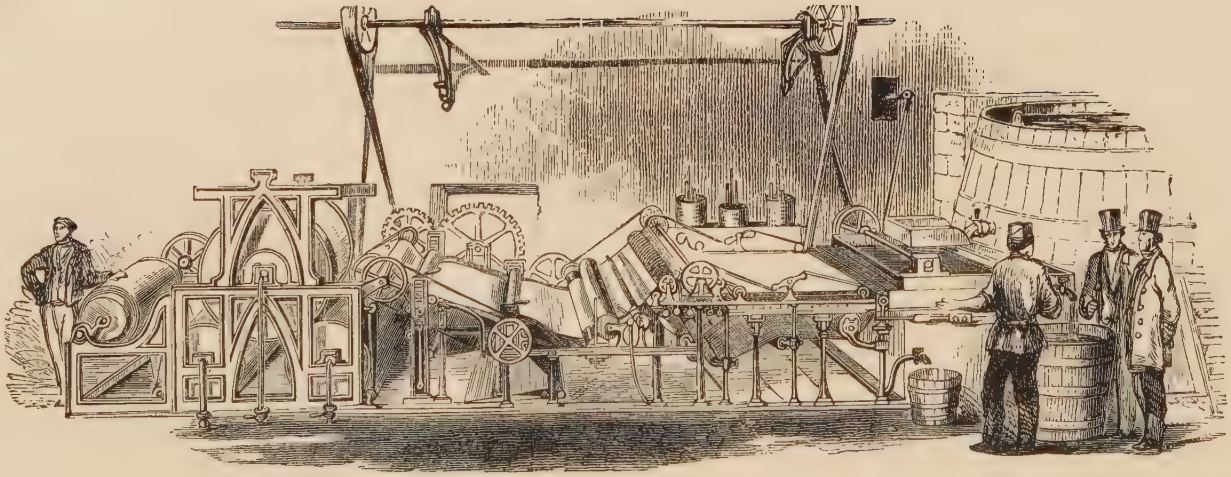
"The crew are only following their calling," replied Captain Becker.

"And I am only following my duty—the simple plain duty of any son that loves his father. No, Captain Becker," continued Robert, "not another word, pray! You will always find me by your side, even if danger and death should stare us in the face. 'A brave heart! always a brave heart!' This is our watchword—mine as well as yours."

"Bravo! my boy," said the captain, rubbing his hands with evident satisfaction. "Your answer is just what I expected, only I considered it my duty to give you the choice, even at the last minute. In my opinion your decision is right; so now onwards in God's name! All hands to work, my men!"

The crew were soon at their posts. The captain gave his orders in a calm, firm voice, and in a few minutes the *Hope* glided out of the harbour into the open sea, with all her sails spread to the breeze.

(*To be continued.*)



ENDLESS PAPER-MAKING MACHINE.

Trades connected with Science and Art.

By THOMAS ARCHER.

II.—PAPER-MAKING.

IT is difficult to understand how the world got on without printed books, and with only a small number of manuscripts here and there among the few people who knew how to read them; but it is still more difficult for us to imagine the condition of mankind when there were no manuscripts either, and the written characters of human language were represented by brief hieroglyphics carved on stone, or marked on bricks that were afterwards baked in the hot rays of the sun. The true *hieroglyphics*, so called from two Greek words meaning sacred writings, were mostly understood only by the priests; and much of this kind of writing has been discovered in the excavations and ruins of ancient tombs and temples. But there were also more common signs or characters used to record historical and other events; and by careful study, and the comparison of one set of figures with another, a large number of these ancient writings have been translated. If you have ever amused yourselves with making a cryptograph,—or method of secret writing,—or in finding out the meaning of what is called a cypher, such as may sometimes be seen in the advertisement-sheets of the newspapers, you will understand something of the method of discovering how to read hieroglyphics.

It would occupy too much space to consider here what was the origin of written language, and, indeed, both its origin and the place where it was first in use would be impossible now to determine; but no doubt the first attempt to convey the meaning of language by written signs was a simple and rude kind of carving, where the figures of animals and other objects referred to were cut on stone or on the stems of

trees, or marked in the sand or clay upon the ground. The origin of using what are called *arbitrary* signs to express our meaning, is quite as difficult to fix at any particular place. Probably the greatest advances in written language were first made in Arabia, but the Greeks, who gave a mythical account of the introduction of letters, attributed the invention of several of the letters in their alphabet to Cadmus. Probably Cadmus was the founder of the Cretan tribe, and was partly a mythical, and partly a real personage; but so little has been learnt about him, as to leave it to be inferred that he was one of the earliest Greek colonists, who brought some knowledge of the signs of written language, called *letters*, from another country, and afterwards adapted and extended them.

When the children of Israel were in bondage in Egypt, it was the custom in that country to write or paint hieroglyphics upon thin slabs of wood; and a great library consisted of a few hundreds of these slabs, each of which was hung up by a thong of leather passed through a hole in the edge of the wood itself.

As the art of writing extended, the signs called letters were used, and a more complete system made it easy to represent language by written signs in a smaller space than that required by hieroglyphics. All sorts of substances were required on which it was possible to write quickly and easily. Plates or slabs of metal, slices of bark, or the large leaves of trees, sheets of ivory, the skins of fishes, woven linen or cotton, and even leather, came into use.

In early Greece they used either thin sheets of ivory or tablets of wood covered with wax, upon which they wrote with stylets—a sort of pointed bodkin made of gold, steel, or silver. In order to prevent the wax from being damaged, and the writing destroyed, it became the custom to enclose the slabs between two outside sheets of gold, silver, or ivory: so that this was the earliest description of bookbinding. The slabs of ivory, metal, or wood covered with wax, were in use in Rome as well as in Greece, and enormous numbers of these books, with their stylets, are still in existence;—a very good collection of them may be seen in the museum of the library at the Guildhall, London; and many others have been found under the foundations of old London, in places where the Romans lived who came to Britain.

These slabs of wood or thin pieces of ivory looked very much like our present books when they were inclosed in their metal covers;—and many of them were extremely elegant. But they soon gave place to parchment, which was more convenient for writing, and took up much less space. Parchment, which takes its name from Pergamus,—

the place where it was first invented,—came into use about 160 years before the birth of Christ, and is still used for law-deeds and writings which require to be preserved for a long time. It is made of the skins of sheep or lambs. Formerly goat-skins and even wolf-skins were used it its manufacture. The skin is first cleared of the hair or wool, and is then placed in a lime-pit to cleanse and soften it; it is afterwards stretched on a square wooden frame drawn tight by pegs, and scraped with a blunt iron tool, wetted with a moist rag, covered with pounded chalk on the side that has been next the flesh of the animal. Then the other side is scraped; the chalk is cleaned off, and the skin is left to dry, after which it is placed on a soft pillow or cushion, and once more scraped and rubbed with a sharper tool. It is probable, however, that skins were prepared for writing before the date already mentioned, for ancient historians describe the Persian records as having been written on leather. The ancient parchment was extremely fine and white, and it soon became so costly that the difficulty of obtaining it led to the practice of scraping the writing from old manuscripts, in order to use them afresh, and in this way many very valuable old writings were destroyed. The finer sort of parchment, called vellum, is made of the skin of very young calves. We have already mentioned that the parchment books were not bound, but were kept in rolls, from which circumstance we get our word *volume*,—a word that is still improperly applied to a book consisting of a number of leaves bound in covers.

As a manuscript on parchment took many months to write, books were enormously expensive, and though their numbers increased, only the wealthiest persons could boast of a library, which generally consisted of a few highly illuminated works, such as missals, short histories, and stories of chivalry. The monks were the principal book-makers, and many of them spent their whole lives in this kind of work; giving the price of their labours to their various monasteries and religious orders. Nearly two thousand monks were employed in writing manuscripts in England alone at the end of the 13th century, before the invention of printing increased the number of books, and at once brought education within the reach of the middle classes of society. Several of the most famous manuscripts of those times, gorgeously illuminated, and beautifully written, were worth from four to nine hundred pounds each.

At the few schools to which boys were sent, as soon as a pupil could read he had to set about copying the author whose works he was taught to study. The general book for the whole school was chained to a desk in the school-room. The master recited the particular passage that was to be studied, and the scholars had to write it out after learn-

ing it. Even the masters had but few books of their own, and none but the sons of nobles and princes could afford half a dozen volumes.

This state of things continued after the invention of paper; for though parchment was expensive, it was the cost of copying that gave the books so much value. It was the discovery of the art of printing, as well as that of making paper, that rapidly increased the number of books, and brought them within the reach of almost everybody who could read.

Paper was, perhaps, equal in antiquity to parchment, for paper is but another name for the *papyrus*, the inner bark or stem of which was made into sheets on which the Egyptians wrote at a very early period. The papyrus is a kind of reed growing on the banks of the Nile, and the paper which was made from it became a very large source of income to the Egyptians, who sent it to Rome from Alexandria. The method of manufacturing this paper was simple enough. The bark of the reed was divided into thin layers, each of them as large as possible, the inner layers being considered the best. After being separated from the stem, these thin sheets or layers were placed upon a flat table, the edges being cut smooth, so that they would come together and form one large sheet. Upon these other pieces were laid crosswise, and then the whole were well moistened with Nile-water, put under heavy pressure, and dried in the sun. The water soaked out the gummy or resinous part of the fibre and caused the whole to stick together. When the sheet was dry it was beaten with a mallet, for the purpose of bringing it to a smooth and even surface. One cause of the disuse of this kind of paper and the adoption of parchment was the heavy taxes placed on the papyrus by the Roman Government, which made it so costly as to diminish the supply. But though this impost was afterwards abolished by Theodoric, the first king of the Goths in Italy, at the beginning of the sixth century, the Saracens, when they became masters of Egypt, interrupted the commerce with Rome, and the supply was so scanty that parchment was substituted; and a new kind of paper made from cotton was afterwards brought into use. It was probably at about the end of the tenth century that this new manufacture was introduced. The Greeks had already endeavoured to supply the want of papyrus and parchment by erasing the writing on their old manuscripts, and using the sheets afresh; and probably a large proportion of the ancient volumes might have been destroyed in this way but for the new invention, which provided a material for common writing-paper, while historical records, deeds, and other important documents of State were still written on parchment.

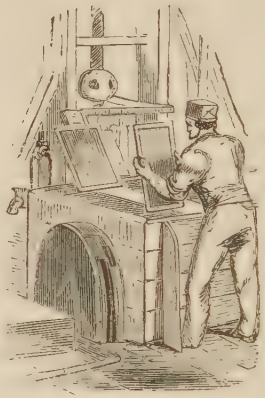
The invention of making paper from cotton fibres reduced to a pulp, and spread into sheets, appears to have been borrowed from the Chinese by the Arabians, and may be said to have been the first great step which only awaited the discovery of the art of printing to make books the common property of mankind, and to spread abroad a wider knowledge of all the other arts and sciences known to the world. It is true that papermaking has been since vastly improved, and that better materials, such as linen rags and other fibres, have mostly taken the place of cotton, while the machinery employed in the manufacture has superseded the old slow methods of manufacture ; but the processes are most of them similar, and the sheet of paper on which these words are printed was produced in a manner not unlike that employed at Samarcand nearly twelve hundred years ago. The first paper manufactory in England was established about the middle of the sixteenth century at Hertford, while another was carried on at Dartford, in Kent, in 1588, by a German who was knighted by Queen Elizabeth ; but the larger part of our supply came from abroad until various improvements were made in the manufacture in this country ; after which it became a very important branch of commerce, though a large quantity of foreign paper is still brought here and sold at a cheaper rate than that made in England, since foreign makers have a larger supply of the rags of which paper is manufactured, and can obtain them cheaper than the English maker, who has to pay a tax on them in the shape of an export duty to most of the foreign Governments. It is hoped that this will soon be altered, and that we shall soon be able to obtain the materials for paper making as freely as we can buy foreign paper.

It is time, however, that we gave some general description of the process of manufacturing paper, either from fine linen rags, of which the best writing-paper is made ; from cotton and linen rags mixed, for printing or more common writing-paper ; hempen rags for wrapping-paper ; and old cordage or tarred rope, for coarse brown paper. Some other substances used for even the best printing and some of the commoner writing-paper will be mentioned presently.

The first operation is that of cutting the rags into small pieces, and this is generally done by women who use a knife set upright on a table. Round this they place each piece of rag, and cut it by drawing it sharply along the edge of the tool. The threads and seams of the pieces of rag are generally torn away, and placed by themselves, if they belong to those kinds of rag used in making the best paper, since the inequality of their substance and the thread or two of cotton that they would contain, might cause lumps or marks in the paper itself. As the

rags are cut, they are carefully dropped into one or another compartment of a large box, so that the various descriptions are sorted according to

Rag-cutting Machine.



Paper Making by Hand.

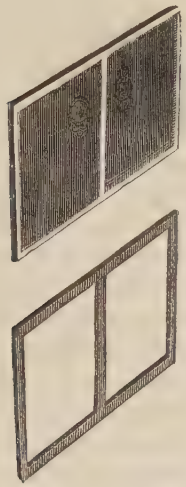
their quality. A good workwoman can cut and sort as much as a hundred-weight of rags in a day.

The next process is to cleanse the rags, which are generally dirty, many of the worst sorts being so full of dust and grit as to require some kind of beating or shaking to clean them, before they are cut. When they are sorted, however, those that are required for use are placed in a large receptacle, where all the dirt is steamed out of them. They were formerly purified by being thrown into a fulling-mill, such as is used for scouring cloth ; but the application of steam is found to be more rapid as well as more effectual, in its operation. From the steam-vat the rags are taken to a great revolving cylinder, the outside of which is fitted with a number of sharp teeth, so placed as to cut against other teeth that are placed beneath it. Between this cylinder and the bed on which it works, the rags are passed till they are torn to shreds ; and as they are kept continually immersed in water, they at length assume the appearance of a thin kind of pulp, almost like water gruel. All the time that they are being torn and mashed, they are not only being soaked in water, but are also mixed with chlorine, or chloride of lime, which has the property of removing all vegetable colours from the rags, and bleaching them almost white. Before the discovery of this use of chlorine, papermakers were compelled to wash their rags over and over again in strong soda and other alkalis, mixed with water, and to expose them to the air and the light for a long time before they were ready for

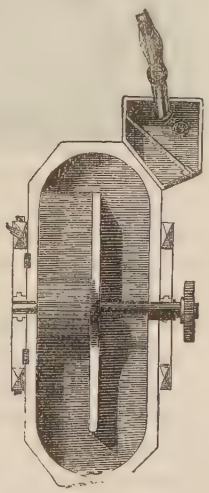
use. When they had done all this, they could not obtain perfectly white paper, and so were obliged to use colours to conceal the disagreeable dirty, brownish tint. Most of the old writing-papers were either a very dull drab colour, or were deeply tinged with blue. Now, however, paper may be made perfectly white by means of the use of chlorine in bleaching the rags, during the process of turning them into pulp.

The pulp is now called *stuff*, and is removed to a vat where it is kept at an even temperature by a steam pipe, and is still further pulped or mixed by the motion of an apparatus called a *hog* until it is fit for use.

Supposing it is intended to produce fine writing-paper,—which is generally made by hand instead of by machinery, and is distinguished as "hand-made,"—a *mould* and *deckle* have to be used. The mould is a shallow square frame, a little larger than the sheet that is intended to be



Mould and Deckle.

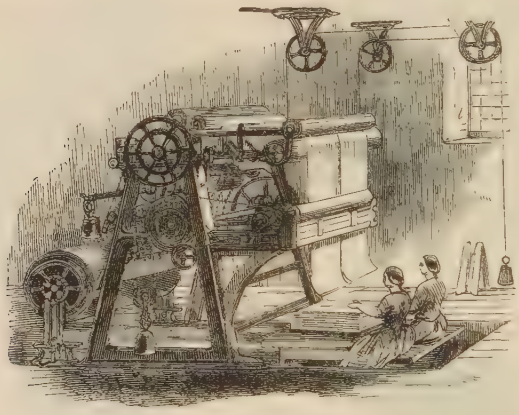


Beating Engine.

made upon it. It is covered with wire cloth, which is cloth woven or fine wire. Years ago this cloth left marks upon the paper, as may be seen by looking at any old-fashioned writing-paper, but it is now made so fine as to leave the sheet perfectly smooth. The deckle is a very thin frame of wood which fits close upon the mould, and is used for retaining the stuff on the mould itself, and for regulating the size of the sheet.

The mould, with the deckle upon it, is taken by the vatman, who dips it into the vat and raises it again with the stuff upon it. Having shaken

it gently to distribute the "stuff" over its whole surface, and to allow the water to run off through the wire cloth, he lays the mould on the edge of the vat, takes off the deckle, and fills other moulds in the same way. Meanwhile, the first mould, containing the rudimentary sheet of paper, is taken away by a man who is called the "*coucher*." He deposits the sheet upon a thick felt or piece of woollen cloth, and



Paper-cutting Machine.

returns the mould to the dipper, who then has another sheet ready for him. This sheet is placed on another felt at the top of the last one, and so on until a pile of sheets called a *post* is formed. The *post* contains several quires of paper, and the whole pile of paper and felt is then placed in the *vat-press*, that the remaining water may be squeezed out of it and the sheets made firm and solid. The pile is then removed, the felts taken out, and the paper pressed by itself; after which the sheets are hung up five or six together in the drying-room waiting to be finished.

The next operation, and the first of the finishing processes, is to size the paper. This is done by dipping several sheets together in a tub of size (made from skins of animals and similar substances), and afterwards pressing them to squeeze the superfluous size out again. The sheets are then hung up until they are dry, after which they are examined, the imperfect sheets removed, and the good paper made into a fresh pile, and once more pressed for the purpose of making the surfaces perfectly smooth. They are then taken down, sheet by sheet, and formed into other piles, in which the process of pressing is repeated, so that every part of each sheet may have received equal pressure. Nothing then remains to do except to count the paper into quires, fold it, and pack it

into reams. These, then, are the operations in making paper by hand; but, of course, much the larger proportion of paper is produced by machinery, moved either by steam or a water mill, and the process may best be understood by referring to the picture, though it is not by any means easy to convey a very clear notion of the operation.

Some idea may be gained of the enormous consumption of paper, when we remember the immense number of newspapers that are printed every day, the magazines and pamphlets that appear each week, and the constant supply of books issued during the year; and when to the paper consumed in this way is added the vast quantity used for drawing and writing, and the tons of wrapping and parcel paper required in shops and manufactories, we begin to feel that calculation is almost impossible. Then there are the paper-hangings for walls of rooms, and the great variety of articles, such as boxes, tea-trays, and even furniture, made of *papier mâché*, or the paper pulp formed into shapes hardened, painted, and varnished.

Paper, as we know it, did not come into use until the end of the thirteenth century, the first machine for its production having been constructed at Ravensburg in 1250. The first paper manufactured in Italy was in 1330; in France, in 1560; in Switzerland, in 1470; in England, in 1588; in Holland, in 1685; in Russia, in 1712; and in the State of Pennsylvania, in America, in 1725. The number of paper-mills now existing in Europe is as follows:—Great Britain, 408; France, 276; Germany, 243; Austria, 78; Russia, 40; Italy, 30; Belgium, 26; Spain, 17; Switzerland, 14; Sweden, 8; Turkey, 1. In the United States of America there are 530 paper-mills. The annual production in Europe alone has been estimated at nearly nine million hundredweights, and the improved paper-mills working continuously for a whole year would manufacture above 62,000,000 sheets, which, if laid side by side, would extend to a length equal to the diameter of the earth.

No wonder, therefore, that the paper-machine mostly in use should be called the endless paper-machine. Supposing the supply of pulp could be constantly kept up, and no accident happened to the machinery, paper could be made in one long continuous strip, miles in length. As it is, the paper is taken from the machine, many yards long, and is reduced to the required length by the cutting-machine, which divides it into sheets. In fact, paper can be made in any size that is likely to be required, at the rate of 25 square feet in a minute, or 15,000 square feet in a working day of ten hours; so that the advantage of the machine over the method of making by hand may easily be seen. To manufacture paper

by this wonderful invention, the pulp is allowed to flow from the vat in a constant stream. It first falls upon a wire-frame, which moves rapidly up and down, so that the pulp is strained or sifted, leaving any knots or lumps behind it. Having passed through this sifter, it flows over a kind of ledge, which has the effect of regulating the stream, and making it fall evenly on to an endless web, or band of wire gauze. This band or web is called endless, because it is joined at both ends just like any other wheel band, and is about 6 feet long. As it passes along it is made to shake from side to side, in order to spread the pulp to an even thickness, and to drain off the water. The pulp is prevented from flowing over the sides by straps which at the same time regulate the width of the sheet. Before the paper in this soft state is cast off from the wire gauze, it is pressed by a roller covered with felt, and is then taken up by another endless band or web of felt, which slopes forward, and absorbs still more of the water that remains in the pulp. It is next seized by a pair of rollers between which it is again pressed, and so passes on to another pair. After this last squeeze it is no longer pulp, but paper, and only requires to be dried and smoothed. It does not leave the machine even then ; but is carried along to a hot cylinder, over which it makes a journey to another hotter still, and to a third which is hottest of the three. More pressure under a woollen cloth, and last of all under a roller that smooths and finishes its surface, and it is completed, having only to be carried to a great reel, on which it is wound, beautifully dry and smooth, and ready to be cut into sheets for use.

Paper made by machinery is often sized by the simple process of adding the size itself to the pulp before it leaves the vat. The whole operation just described takes only two or three minutes from the time of the pulp leaving the vat to the winding up of the perfect paper on the reel at the other end. So many improvements have been made in the different arrangements of the paper-making machine that it would be almost impossible to describe them. Sometimes fans or hydraulic pumps are used to make a vacuum,—or, in other words, partially to remove the air from under the wire gauze while the pulp is passing along, and by this means the water is drawn out more completely ; another invention is for sizing the paper as it travels in the machine ; and a third unites two layers of pulp so as to make very thick even paper ; but the description here given will generally apply to all paper made by machinery.

After the paper is cut into sheets it is examined, and the damaged sheets being removed it is counted into quires, pressed into reams of

twenty quires each, and tied up in wrappers for the stationers. Many years ago, it was common to weave various figures and the date of the year into the wire moulds in which paper was made in order to distinguish it. The earliest paper used by Caxton and some other printers has the head of an ox and a star, a dog's head and collar, a crown, a shield, or a pig, impressed upon it. The paper still called foolscap first obtained its name from being marked with a fool's cap and bells; while other writing-paper bore the sign of a horn, and was, perhaps, called post, from the fact that in those days the postmen who carried letters generally blew a horn to give notice of their presence. The best hand-made paper is still often marked with the name of the maker and the date of the year in which it was manufactured, a circumstance which has sometimes been useful in detecting the forgery of pretended documents, which not very clever rogues had imitated on paper made at a later period than that which they had declared was the date of the writing itself.

A very great variety of materials have been introduced from which paper may be manufactured. In China and Japan it is principally made from the bark of a kind of mulberry tree, called the paper mulberry, and the process is remarkably simple, very much resembling that already described as the mode of preparing the ancient papyrus. To make the thinner paper, the inner bark and pulp of this tree is reduced to a paste, which is painted on to a board or a flat stone and allowed to dry, so that the sheet can be stripped off. The Japanese are, perhaps, the most skilful paper-makers in the world, and use a number of vegetable fibres that are scarcely known here: their processes are simple, but simple as they are we have not yet learned to imitate them. There, as in China, umbrellas, furniture, bowls, cups, boxes, chests, tables, stools, fans, lanterns, and even pocket handkerchiefs and some articles of waterproof and other clothing, are made of paper. The variety of texture, strength, fineness, and durability of the Japanese papers is remarkable, but we cannot at present obtain any supply of the materials of which it is made. In China a kind of straw-paper was known long before paper came into general use in Europe, and straw is now largely used for the manufacture of paper both in England and on the Continent. The great cheapness of the material renders it most useful for the manufacture of common writing and printing papers. The fibres of wood have also been lately used for the same purpose, and some experiments have been made with saw-dust, but without any very satisfactory result. It would seem that almost any fibrous material which is sufficiently tenacious and will separate into filaments may be used; but such fibres as possess these

qualities are too costly, since they can mostly be used for other purposes, or a sufficient quantity of them cannot be obtained. Flax, cocoa-nut fibre, and a large number of other vegetable substances, including seaweed, have all been experimented upon, but none of them have at present superseded the use of rags; for rags are waste articles, and are of comparatively little worth. Only one article has increased, and that is likely still to increase the paper-making material. It is a kind of long coarse grass, called esparto, and is found on the coast of Spain, opposite Morocco, where it grows in great abundance. This, either alone or mixed with rags, is a valuable material for paper-making, and is used in the manufacture of some of the best printing-paper. A coarser and inferior description of grass found in the deserts of Algeria, and known as alfa or alpha grass, also comes to this country, and is used for inferior papers.

In the preparation of the stuff or paper pulp from all these materials the process is similar to that already described in the treatment of rags. Various chemicals are used for bleaching or separating and softening the fibre, but the operations are much the same. It is necessary, however, to have a good knowledge both of chemistry and of mechanics before any one can be said to understand the trade of paper-making.

The Nohak-Burner.

By JAMES GREENWOOD.

CHAPTER III.

IN WHICH ARRI WINNIKEEP SEEKS THE COMPANY OF HIS BETTERS.

THAT same afternoon the poor old spear maker was washed in the sea, and afterwards painted and scented and wrapped in mats after the Tannese custom, and buried. To make friends of the Nohak Gods and avoid all suspicion, the murderer made the priest a present of some value, besides intrusting him with a very liberal sacrifice to be made on his dead father's behalf.

After that he immediately stepped into the reward of his crime and hypocrisy. All his father's goods, the spear-heads, and hatchets, and iron-tipped clubs and arrows, were his beyond dispute, and he took possession of them and carried them to his own hut. He was a prosperous man now, and could afford to hire a porter to do this goods-moving job; and amongst the rest the man presently came staggering under the weight of the well-worn stone anvil the old smith had so long and so worthily laboured at, and which yet bore traces of the blood his unnatural son had spilt on it. But Arri Winnikeep would not give it house-room, and bade the man carry it home and keep it for his pains, which, being something of a smith himself, he was very glad to do. Then he conveyed one half of all his treasure of arms to the king's armoury, and there disposed of them at a fair price; and some of the spear-heads and ornamental clubs he kept, and others he distributed as presents amongst the brothers of Kiri Moa, his sweetheart, by way of making favour with them.

And was he successful? Undoubtedly. They clapped him on the

shoulder and called him a good fellow, and declared that all along they had known that he was a lad of the right mettle, only that he was kept under by his narrow-minded old father. Would they drink with him? Ay, that would they, and never stint the favour. So with their rich presents tucked under their arms the three brothers drank palm-wine and cracked jokes and laughed in Arri Winnikeep's hut; and by-and-by he hinted his desire to make their sister Kiri his wife; but that, so far from quenching their good humour and laughter, only increased it, and they cracked more jokes and persisted that he was a good fellow, a most excellent fellow, only that, as regarded this particular wish of his, he must wait. With this answer he was perfectly satisfied, and next day spent the value of two of his old father's best spear-heads in buying a pair of bright copper anklets and a necklace of blue beads, and these he carried to Kiri Moa and begged her acceptance of them, at the same time acquainting her with the manner in which her brothers had received the previous hints he had ventured to throw out. On which Kiri Moa, who was not insensible to the young man's fascinations, blushed pleasantly, and said that her brothers, for young men, were very wise indeed.

Now, indeed, was the son of the old blacksmith happy. He had means wherewith to procure paint and feathers, and he was no longer compelled to anoint his supple limbs with disgusting pig's fat, but could afford to buy oils of the most approved scent and quality. As for the three brothers of Kiri Moa, so far from their friendship abating, it daily increased, and they seemed never so happy as in his company. They ate with him, drank with him, hunted with him, and sat very late of nights with him in his hut getting drunk on palm-wine. It now was a perfectly understood thing as to his intentions towards their sister, and though her name was never mentioned, when Arri Winnikeep lifted his shell and drank "to the most lovely," the brothers responded merrily, and with knowing nods and winks at each other; while, as for the young lady herself, she grew more bewitching and smiled on him more encouragingly each time he saw her. So happy was the young fellow, and so completely engrossed in the whirlpool of delight into which he had plunged, that it was only when occasionally he awoke thirsty in the night and found himself all alone and in the dark, that he gave a single thought to the terrible crime he had committed. And even then the remorse was of a very few minutes' duration. His reflections escaped to dwelling on how happy he had been,—yea, and what a glorious to-day was before him; and then the picture of his little old father lying bloody and dead by the forge side faded quite out of his mind, or, if not quite,

there remained only such a weak fag of it as might be easily argued away.

"I am a fool to trouble myself so much about it. Of what good was his life to him?" (his father he meant). "Have I not a hundred times heard him wish that he was dead?" (This was true, but it was only when he felt so ashamed of his idle son.) "If he wished to die, and couldn't, was it not my duty as his son to assist him? What gain was it to me to kill him? True, I came in for a few spear-heads; but of what value were they as compared with the head upon my own shoulders, and that they would undoubtedly chop off if they were to find out what I had done. Just see now the risk I have run to assist my old father!"

And then he would grope in the dark for the wine-skin he invariably laid by his bed-side, and taking a long pull at it lay down again, to dream blissfully of Kiri Moa and those prime fellows her brothers.

And so matters continued while his slender stock of wealth lasted. But there is a bottom to the sea even, and unless fresh water flowed into it, the fishes would one day drink it up to the last drop. Kiri Moa's brothers were thirsty as fish, and, chief's sons though they were, as ravenous and unscrupulous as sharks. Arri Winnikeep's purse was after all but a shallow one. Every day he applied empty-handed to it, and brought up a fist-full, and repeated the process day after day, till presently he had to plunge wrist-deep before he could take any fish at all.

This made him look glum and bite his finger nails. "This won't do!" said he; "I've laid on my paddles too long, and if I don't mind I shall miss the tide and find myself grounded in the mud. Let me see; it is now three weeks since I ran that tremendous risk to assist my foolish old father in his desire, and how much closer am I to the object of *my* desire? Very little: Kiri Moa's brothers drink with me more than in the old days, and are more agreeable and familiar; but since I broached the all-important subject and they said 'wait,' there it has rested. If I don't look sharp, I shall in a little while be once more reduced to common pig fat again, and go back to the beastly red-earth jar instead of scented paint. That will never do! I might as well write on my face 'This is Arri Winnikeep, the fool, who has wasted his inheritance, and is now a meaner beggar than ever.' I know what I'll do—I'll make Ki-chi the day after to-morrow, and then I'll put the question to Kiri Moa's brothers fair and blunt, as a man should."

"Ki-chi" is Samson, and means great feasts, or rather wine-feasts. But to accomplish his purpose, on making calculation, he discovered that

he must sacrifice at least three of the best spear-heads remaining of his stock to meet the expense. But it was through hesitation that he had been hitherto lost, so he hesitated not a moment, but carried the spears stealthily to the king's armourer, and sold them to him at such a price as enabled him to provide a baked hog and some yams and tobacco, and as much yellow palm-wine as could possibly be drunk. Indeed so liberal had he been in the purchase of the latter essential, that he had not left money enough even to pay the porter that carried it home for him, and instead of receiving satisfaction in heads (which in Tanna do duty as money), he had to be content with a couple of yams, Arri Winnikeep telling him with an air that it was not convenient to open another bag of heads just at present.

So the Ki-chi was prepared, and the brothers invited, and in the most good-natured way in the world they accepted the invitation. It was a first-rate feast. The pig was juicy and tender, and the tobacco so excellently strong, that a single whiff of it made the eyes water. As for the wine, Kiri Moa's brothers paid their entertainer the compliment that they had never tasted finer or more delicious-flavoured. No doubt this accounted for the tremendous quantity of it they consumed. As before observed, the stock laid in was thought abundant, even though they kept up the bout far into the night; but scarcely was it dark, when the foolish young man began to fear that he had underrated the drinking powers of his friends. At the rate at which they were tossing off calabash after calabash, and wantonly spilling what remained in their cups, that they might fill again fresh wine for a fresh toast, the liquor could not possibly hold out two hours longer, and by way of eking it out, Arri Winnikeep took to stinting his own measure, more frequently than not raising it to his lips and setting it down again without tasting a drop. This was good for him in one sense, but bad as could be in another. He had not yet put the momentous question, and each succeeding moment found him in worse case for doing so than the last. His Ki-chi was going for nothing at all. His plan was to make merry, very merry indeed, and just when good fellowship ran highest, and they were all of a mind, to introduce the matter that weighed so heavily on his heart, appealing as well to their generous sympathies as their friendship. But this failure of the wine-jars had put him completely out in his reckoning. Had he found the courage to drain a calabash or so of the potent drink, he might have screwed himself up equal to the effort; but as it was, he was growing more sober, more doubtful, and sad, and miserable.

None the less so when he discovered that the more intoxicated Kiri

Moa's brothers grew the less they were disposed to treat him with cere mony. So taken up were they in relating bragging stories of their prowess on the battle-field, and how this and that mighty fellow had either fled or fallen before their might, that they scarcely noticed him at all. Once, when the conversation turned on the neatest way of braining an enemy, and the tipsy speakers on the matter found vent in high words, Arri Winnikeep ventured to put in a word or so, but was instantly taken up and snubbed by Kiri Moa's eldest brother.

"Thou mistakest the subject of dispute, good sir," said he, coolly; "we are arguing a point of war."

"So I understood," answered Arri, faintly.

"So you understood! Pshaw! what dost thou know of war, white head? Be peaceable, and pour the wine out, and presently we will discuss the latest fashion in face-painting and hair-combs, and then thou shalt lead the talk, as thou art fit."

This was a cruel stab at the young man, but his case was so very desperate, that he could not resent it. Besides, a glance round the board revealed plainly enough that the sentiment of the brother that had spoken was likewise the sentiment of the others. So he affected to treat the matter as a joke.

"Truly," replied he, laughingly, "I am not as yet that hard-mouthed warrior as to prefer spicing my wine with war stories rather than love stories. It is for me to order belly entertainments for my guests, and not to govern their conversation; still I am not averse, at your convenience, to talk of women and their ornaments. It is a subject that sweetens even wine, I think."

"I prefer my wine unsweetened, then," replied the elder brother, abruptly.

"Were I permitted to choose a subject for talk," continued Arri Winnikeep, not noticing the interruption, "it should be concerning your lovely sister Kiri and the magnificent necklace she shall wear on her bridal day."

But at this speech the three brothers regarded each other, and laughed meaningly.

"Ay, ay!" exclaimed the youngest brother, "we will talk of that presently. There is a time for everything, and this is a time for drinking. I hope thy wine, O Arri Winnikeep, is plentiful as it is prime, for I am a rare toper when I once begin."

"There is wine in plenty," replied the desperate young man. "Fill to the brim, my guests, and let us drink to my promised bride."

"To his promised bride!" And they nearly drained their cups at a

draught. "And now to our own promised brides, and our uncles and cousins every one, and to each a brimmer."

But this mad game could not last. The wine-jar was tall, and of a capacious belly; but these attacks on it weakened it sorely, and presently the lightness with which it came to hand proclaimed it empty.

"Quick! fill again, O brother-in-law of the future," exclaimed the youngest brother; "we will now drink my aunt Noa: she is not young or a beauty, but she will serve to drink to."

"There is no more wine!"

"How, no more?"

"The jar is empty."

"That were easily remedied." And, rising, the young man staggered to the door of the hut, and hallooed to a man that happened to be passing.

"Come hither," he cried; "take thou this wine-jar and as many heads as Arri Winnikeep shall give thee, and hasten to have it filled with wine of the best. Quick! for our mouths are hot."

So the man, being poor and glad of the job, took the jar and held out his hand for the heads that were to pay for the wine.

"The jar cannot be filled again to-night," faltered Arri Winnikeep.

"That we will believe when the wine-seller returns thee thy jar empty."

"He will not fill it without payment, and I have but an empty purse," said Arri Winnikeep, in shame and confusion.

"How is this?" demanded the eldest brother, frowning. "Were we asked here that we might be mocked?"

"Canst thou not, good brother-in-law of the future, spend in wine that which was to purchase the magnificent necklace for our sister?" asked another, seriously.

"Ay, or canst thou not carry to the king's armourer three other such spears as he bought of thee yesterday?" spoke the youngest brother, made insolent on the wine the purchase-money of the three spears had procured. "Thou mayst as well dispose of another three—nay, all thy stock, for that matter, since a stick were as good in such hands as thine."

Now had Arri Winnikeep taken as much to drink as had the rest, it would have been impossible for him to let these insults, and especially the last, pass without demanding at least some apology; for though, as already stated, no warrior, he was a tall and powerful young fellow; nor was there either of the three brothers his match at least at wrestling. But luckily he was sober enough to keep his temper and think coolly.

"If I strike one," thought he, "I shall get the knife of the rest in my back. They are all of a mind, that is clear, and at heart the mean fellows I have all along suspected them of being, and I only court their company to win their sister. It will be better for me to conceal my hatred and contempt for them until I am their brother-in-law; then they shall find the sort of fellow I am." Instead, therefore, of showing anger at their rudeness, he affected to treat it as a pleasantry.

"Nay," said he, "I would rather see my spears in the hands of those who will soon be my kindred than melt them in a wine-jar that my guests may swallow them, else there are three spears in my stock that might fill the jar ten times full. These three it was all along my design to give thee, and now thou shalt make selection."

It was hard indeed to quarrel with a man and accuse him of stinginess when he so freely offered presents so magnificent; so at once they altered their tone, and declared that he was the most generous fellow alive, and that if, as they were afraid was the case, they had said anything uncivil to him, it was himself, and not they that were to blame, since the strength of the wine he had set before them had fairly floated their wits out of bounds.

"Since that is so," said Arri Winnikeep, when each had selected his weapon, "it will not surprise thee that I am fitter to lay my head down on my mat than aught else. I cannot drink with you brave, strong fighting men."

And so, cordially embracing, they parted to all appearance the best of friends.

CHAPTER IV.

IN WHICH THE SPEAR-MAKER'S SON COMMITS A CRIME IMPOSSIBLE TO A TANNESE.

NOTWITHSTANDING these protestations of unabated friendship, however, after that memorable evening Arri Winnikeep saw little of Kiri Moa's brothers; indeed, they never would have exhibited so much cordiality towards him only that they exaggerated his wealth, and set him down as fair game for fleecing for many a month to come.

But now that the true condition of things was unmasked to them, they promptly set about remedying the error they had committed. They told the story amongst their friends (the story about the empty wine-jar, that is,—not a word did they have to say about the handsome present of spears), and when Arri Winnikeep made his appearance

among the wrestlers and surly swimmers, he speedily discovered that everybody was making fun of him—the women as well as the men. Even his Kiri Moa, though she did not as yet turn her back to him (for, really, she was a young woman with a kind heart), looked much distressed at the whispering and giggling, and could not conceal the pity she felt for the object of it. Nor was it only amongst people of the better sort that the comical story of the poor-rich man of the empty wine-jar was current. The fellow whom Kiri Moa's brother called to the hut to fetch a fresh store of liquor, and who only missed the job through Arri Winnikeep's poverty, maliciously related the circumstance, with additions to suit his fancy, to his intimates; so that, one way and another, the wretched son of the murdered spear-maker could find no more comfortable place than the solitude of his own hut; and there he sat sulking and smoking from morning till night.

But as he sat so long without a neighbour, he did something more than sulk and smoke: he pondered, and resolved in his mind the pretty ass he had come to, and whether there was no remedy for it. There was no shirking the glaring, staring fact that ruin was rapidly overtaking him. Even the friends of old times—the mat-maker and the thatcher, who used to feel honoured if he drank or smoked with them—now openly laughed at him, and when they met would slyly rattle their fingers in their mouths, producing a hollow sound such as might be got out of an empty jar. As for his new and genteel friends, they simply looked up at the clouds when they saw him coming, never ceasing to take an interest in what they saw there till he had fairly passed by; while Kiri Moa's youngest brother had so provoked him with his insolence, that he had been compelled to give him a drubbing; so that, if the three brothers wanted an excuse for holding aloof, now they were provided with one. He had not set eyes on Kiri Moa for a week and more, and though he was in agonies to know her feelings towards him, he dared not go to her father's house to inquire.

He was growing poorer every day, and the more so that although he seldom stirred from his hut, and had lost all appetite for business of the table, his dread lest people should think him poverty-stricken, that he still continued to order the most expensive meats and wines, and rare oils and paints for the decoration of his body, though more often than not no one but himself was aware of their application. At the expiration of another fortnight, however, he found himself reduced to pig fat and coloured earth, and in these he sat as in sackcloth and ashes, gnawed by melancholy, and fit company for no man.

Clearly something must now be done. What? was the question. He

was not at all scrupulous. He had already done one murder, and was not in the least alarmed to contemplate another—twenty more, rather than endure his present misery.

Many days the young man sat pondering in this dismal manner, till one evening, sudden as such things happen, an idea came into his brain of so brilliant a nature that it seemed fairly to dazzle him, compelling him to put up both his hands to his eyes, covering them. It was like a lightning-flash from the fiery bottomless pit, as who shall say it was not, since the murderer of his father had sat so long suing dastardly contrivance.

Yet, considering the prodigious amount of wickedness that was conveyed in the thought, it was marvellous that he recovered so rapidly from the first shock of it. Even as it was, although he withdrew his hands from his eyes and stared boldly before him, there remained within him certain qualms that needed coaxing and arguing down. "Why not?" whispered he, half aloud. "Why should I not, if I am bold enough, make myself more powerful than these insolent upstarts, Kiri Moa's brothers? Why should I not, if I see the path and find the courage to tread it, climb to higher distinction than the first chief in Tanna—higher than the king even? How came he on the throne? By his bravery—by the slaughter of a thousand men and more, who opposed him. Why, then, should not I gain this great distinction when I find myself with the bravery to endeavour for it, and but *one* man's life stands in the way? It is easily proved. If I am courageous enough to win the prize, I *shall* win it; if at the last moment I show myself a coward, why, then I shall not win it. But I *will* win it. Ere another week, Arri Winnikeep, the despised son of the lame old spear-maker, will bear the staff and the fire-pot, and be the greatest man in Tanna."

Had he been a born Tannese, such a terrible idea could never have entered his head, for even the smallest child in Tanna could tell you that it was simply impossible for any man to carry the sacred staff and fire-pot unless the gods appointed him. If a man should show himself so monstrously wicked as to attempt so to impose on the gods, he would, without doubt, be instantly afflicted with all manner of horrible aches and pains, and shortly die as terrible a death as the fire-pot could brew for him. But Arri Winnikeep was not a Tannese; as before stated, he was a Sampan, and possessed of the daring spirit that distinguishes that profane people. All along he had affected a belief in Nohak, since to have neglected to do so would have been to have rendered himself intolerable in the eyes of the staunch believers; but in his heart he despised Nohak and all its belongings, and never so much as since

his father's murder, when the priest was glad to conceal his ignorance under cover of a lie.

So, having quite made up his mind to the perpetration of the monstrously wicked deed, all that remained was to arrange the manner of it. Should he affect illness and sound his horn, and, when the Nohak priest answered to the summons, fall on him and kill him there and then? This at first appeared a feasible plan, but, on second thoughts, it was manifestly an unsafe way. Somebody besides the Nohak priest would undoubtedly hear him sound his shell, and this would, in all probability, lead to awkward suspicion and questioning, if the priest were never afterwards seen alive. No, it was clear that he must dispose of his victim secretly, and away from the village, even though he was compelled to defer the carrying out of his scheme until a fitting opportunity presented itself.

As everybody knows, Nakina—the devil, that is—is never backward at assisting his friends. After a few days of careful watching, Arri Winnikeep discovered that when the Nohak priest retired from his duties in the town, he retired to the forest, and there occupied a little hut built of boughs on the eastern side of the island facing the sea. The sacredness of the habitation should have protected it from invasion, but Arri Winnikeep never gave this a moment's thought even, and one day, watching the priest out of sight, he entered the hut and explored it. "If I were a common thief now," said he to himself, "here is a chance of making myself rich without going a step further, for I'll be bound this old impostor has feathered his nest pretty warmly with the gifts and offerings these foolish Tamese have intrusted to him." But although he searched every corner of the hut, and poked and pried in the crevices of the wall, he discovered nothing. The furniture of the place consisted of a mat, a stool, a jar for water, and a pot for cooking,—and that was all. "Why, the man must be an idiot!" said Arri Winnikeep, in disgust; "had I held his place as long as he has, I'll warrant I would have had more to call my own than an old stool and a cooking-pot. The sooner this disgraceful state of things is altered the better."

And he set about their alteration there and then. He knew that when once the Nohak priest left his house in the morning he seldom returned to it until evening; therefore he had several hours before him. He had a spear with him, and with this he at once busied himself in digging a hole in the soft yielding soil about twenty yards distant from the hut. It was not a very deep pit, and only just long enough for a man to lie in, and when he had dug it he strewed the bottom of it with dry resinous sticks and twigs, the driest he could find, to the depth of a

foot or more. Also he collected and piled, just at hand, a great heap of twigs and sticks of the same sort.

How he afterwards occupied himself, it is not worth while to inquire, or how the doomed Nohak priest passed through his last day, or what time he returned to his solitary hut in the evening, and the reception he met there. Without doubt a terrible tragedy was there enacted, and there was a bonfire in the last act of it—a tremendous conflagration, the light of which might be seen far out at sea, and from the most distant extremity of the land. Nobody missed the appalling sight. The fishermen out in their boats observed it, and the Tannese landsmen, every one observed, and the consternation and amazement of all was such as had been never before experienced. And no wonder! Although few dared approach the sacred hut of the Nohak priest, all knew its exact situation, and that was the situation of the great fire.

What its origin was nobody doubted. It was a Nohak-burning. The priest was burning—by direction of the gods, of course—for somebody of such consequence that a smaller fire would not avail. For whom? For the whole town, perhaps! And when they thought this, such quaking as there was throughout the whole population, it is impossible to describe. Perhaps, however, the great fire was for some great personage only—for the king perhaps! So thought his majesty himself, and very unlike the bold-eyed, unhesitating ruler, was the shivering wretch who, shut up in his chambers, applied his frightened eyes to a chink in the wall that commanded a view of the rising beckoning flames, while his knees, so strong in battle, smote together with a sounding. But this was only at first—when he was startled by the wailing and universal blowing of horns from his royal couch; presently he recovered his courage and his kingly dignity. "If it be the will of Nohak, so be it," said he, and with all submission he bowed himself before his idol that stood in a niche at his bed-head—whose nose was the blade of a sword-fish, and whose eyebrows were the red feathers of the sacred *etu* bird. After this he felt better. "Only that I feel nothing at all the matter with me, I would command my Nohak shell to be sounded," said he; "after all, the fire may not be for me. I think I should feel its effects if it were so." Nevertheless he kept very anxious watch towards the great fire through the remainder of the night.

So, beyond wondering and quaking, and praying, no one took steps to inquire what was the cause of the fire. As I before observed, there were a few horns blown; but finding that their summons was not responded to, the blowers did not repeat the signal, partly out of fear of disturbing the priest in the awful work on which he was evidently engaged. So

that, so far, everything was as the cunning Arri Winnikeep judged it would be. And well for him was it that he had made no miscalculation in his devilish plot. Supposing that the belief of the Tannese in Nohak had been in any degree less, and that, perceiving the unusual glare, they had ventured into the forest to inquire into its cause, they would have made a discovery. The man whom they sought, the Nohak priest that is, would have been missing, and instead they would have beheld the old spear-maker's son busy about a fiery pit, and piling fresh wood when the furnace flagged, and fanning the flames at the four corners. This is the spectacle they would have beheld had they delayed their coming until the flames beckoned them; if, however, they had arrived at the spot where the priest's hut was known to stand a little while before, they would have seen a still more terrible sight; nothing less so, indeed, than the good old Nohak priest kneeling beside his cooking-pot, and cooking herbs for his supper, and a man—no other than Arri Winnikeep—stealing stealthily behind him to bury his long keen knife between the poor old fellow's shoulders.

Beside the king, the great blazing Nohak fire had filled every man and woman in the town with consternation. It was the sickly season in Tanna, and many persons in the town lay ill before the fatal sign appeared in the east of the forest; all these became worse rapidly. Hale men and women, subdued by fright, come the morning, were unable to rise from their mats. The daylight, however, gave them courage, and such a blowing of Nohak shells was there then as never before was heard. From almost every hovel, as well as from the most genteel huts, the doleful sound was heard; and had the Nohak priest the power of attending to twenty applicants at once, he would still have been unequal to the heavy task imposed on him.

(To be continued.)

Sliding.

EVERY English boy is so thoroughly acquainted with the amusement of sliding, that were any one to ask him if he could slide, it is more than probable that a suppressed mutter about "cheek" or "impudence" would be the result of such an impertinent question. But how many of the boys in England who slide could give a correct definition of the term? Sliding, like everything else, is regulated by certain laws, and how many would be able to explain them. A schoolboy knows that he can slide on ice, but why could he not with equal ease take that exercise on wood? Ask him,—and he will say that ice is smooth; but beyond that he will answer nothing. We will investigate the matter. If a piece of stone be thrown along a level sheet of ice, it will be carried along for a hundred yards or more, but it would not go nearly so far on wood. How is this? The reason is that the friction caused by the contact of the stone with the ice is very much less than that produced by the wood, and therefore does not impede the stone as much in the former case as in the latter. Now, there is an exact counterpart to the throwing of the stone, in the act of sliding. The sole of the foot, in the latter case, corresponds to the lower surface of the stone in the former. The velocity with which the stone is propelled is, in the former case, produced by the arm; in the latter, by the motion of the legs in running previous to setting foot on the ice. The difference in the distances travelled is owing to two causes:—

1. The difference in the weights of the bodies.

2. The difference in the velocity produced, that in the former case being much greater, in proportion, to that in the latter.

After what we have now said, it is not so hard a matter to define sliding. It may be said to be "the act of propelling the body in an upright position along a smooth surface," as that of ice, by means of velocity previously produced by the exertion of the limbs. But something more than mere setting foot on the ice is required. The body must be kept upright, and when the slider seems to be losing his equilibrium, he should try to restore it, not by forward or backward motion (which would in all probability destroy it altogether), but by stretching out one or both of his arms, as occasion may require. The body must lean forward rather than backward; for should the performer once get on his heels, there is not the remotest chance of his regaining his footing on the ice again till he has measured it with his body. As in everything else, feats on the dangerous surface must be let alone till the slider is well versed in the elements, and can go along with perfect ease. For instance, what would you think of a boy who tried sliding on one leg before he could slide on two, or who tried sitting down in the middle before he was sure he could keep up all the way without *falling?* There are many evolutions elegant enough in their way when performed by an experienced slider; but danger generally attends them, to say the least of it, when practised by a novice.

Thus much for the method and meaning of sliding; we must now consider the different ways in which it is performed in other countries, as well as the advantages it confers on the youthful population of our own.

With a climate like that of England, where in the winter season frosts are very prevalent and very severe, it is not to be wondered at that some means should be devised for making the ice a medium for pleasure and amusement. In the summer, when the climate is genial and warm, there is no lack of games and healthy diversions, such as cricket and other sports; but when the winter comes, it is necessary to find some other means for supplying the wants of young people. Naturally enough the ice has its charms for country boys, who take as much pleasure in sliding along the village pool as the London youth does in skating along the Serpentine. Thus it is easily seen why it has become so popular in England. But it is not only here, for in all northern countries we find either the exact pastime of sliding, or something analogous to it. In Holland, almost every one, high and low, rich and poor, small and great, knows how to skate and slide: the market-woman hums while she skates to market, with her basket of butter on her head. In Russia, the peasants pour water down a steep slope, which

the acuteness of the frost soon hardens into ice, and then amuse themselves by pushing each other down in a sitting posture. In Denmark, Sweden, Norway, and all the northern countries of Europe, the same system is practised.

With regard to the antiquity of these amusements, we have not much evidence on that point beyond what is said in our own language. The poet Ovid, in a graphic description of the effects produced by the intense cold which prevailed in the Crimea and Southern Hungary in his time, speaks of the people making their way over the rivers on foot. Is it not possible that this may refer to something of the kind? Perhaps to some rude method of skating or sliding performed by the natives. Not much is said in classic authors, for the reason that the southern countries of Europe are in low latitude compared with that of England, and so do not experience the extremes which we do. We may, however, with probability suppose that it has been practised for centuries, perhaps beyond all records of profane history which we possess.

And now as to the advantages of sliding. As there is nothing more important than proper and sufficient exercise for the limbs, it must readily be perceived that an amusement like sliding, where the members are kept in constant action, is highly advantageous. In every nation of the world, the necessity for this is displayed, and the value of it clearly shown. Even the most uncivilized natives of Australia take care to let their children have exercise of such a kind as procures for them health and vigour during the period of their existence. And which is better, going out on a cold frosty morning, and getting the body in a glow by good exercise, or sitting over a fire, heating and injuring the system, which will inevitably lead to attacks of nervousness, headache, and other kinds of illness at some future time? There is another advantage to be obtained from it,—it causes a pliancy of the limbs, strength and vigour in the legs, and a healthy constitution, which is greatly to be valued. Yet, as in everything else, caution is to be exercised in the way in which it is performed. Sliding should not be indulged in after the system has been heated by sitting in a warm room. Going out into cold after sitting in a heated atmosphere is anything but beneficial; neither should it be performed without a hat, or with insufficient clothing on the chest. Care must be taken in choosing a place whereon to slide, especially if a pond is the locality selected. There *are* accidents which cannot be avoided: when a young boy begins to slide, he may have a great many falls; but such falls generally produce a few bruises which are not dangerous. The

only cases of danger are when one limb is bent under another in falling, and in such cases the member is liable to be fractured. Such accidents as these are pure accidents—they cannot be avoided. Whatever anxious mothers may say against sliding, it must be admitted that it is a healthy exercise; and that as long as there is a season of winter, it is one that will always be popular, and will ever be associated with ice and snow in the cold, inclement climate of England.

TO PUZZLES.

On Pages 59—64.

1. * * * *
2. * * * *
3. * * * *
4. * * * *
5. Sugar.
6. Churchman.
7. Gander.
8. Valley.
9. Smile.
10. Whole.

11. Cryptograph.

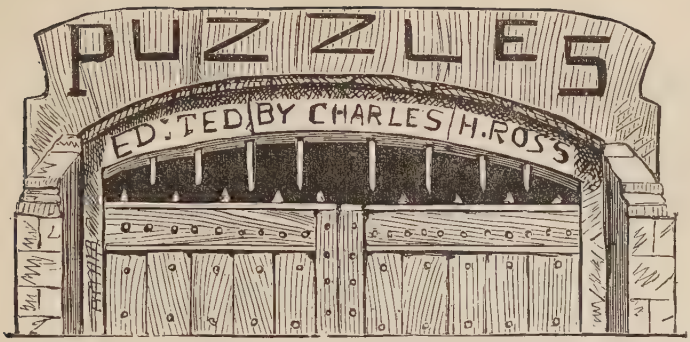
"Done to death by slanderous tongues
Was the hero that here lies;
Death, in guerdon of her wrongs,
Gives her fame which never dies:
So the life that died with shame,
Lives in death with glorious fame."—*Much Ado about Nothing.* Act v., Scene 3.

12. Ring, Idol, Nose, Glen.
13. Soap, Otho, Ahem, Pomp.
14. Rope, Over, Penn, Erne.
15. Opal, Pole, Alps, Less.
16. Arid, Rose, Isis, Desk.
17. Temperance.
18. Cordé, Marat.
19. Florence Nightingale.
20. Lord Raglan.
21. Heights of Inkerman.
22. Lord Lucan.
23. Lord Cardigan.
24. Evangeline — Longfellow.
25. Disraeli.
26. Jackson.
27. Ladder.

28. Cryptograph.

To the old, long life and treasure;
To the young, all health and pleasure;
To the fair, their face
With eternal grace,
And the soul to be loved at leisure;
To the witty, all clear mirrors;
To the foolish, their dark errors;
To the loving sprite,
A secure delight;
To the jealous, his own false terrors.

29. Longfellow.
30. Percy Bysshe Shelley.
31. Thomas Chatterton.
32. Robert Southey.
33. Samuel Taylor Coleridge.
34. Henry Wadsworth Longfellow.
35. Elizabeth Barrett Browning.



1.

My *first* in Grammar's full well known,—
Indefinitely used,—
A prefix,—every day has shown
Most flagrantly abused.

My *second's* a conceited "swell,"
Insufferably vain,—
A hated name,—I know quite well,
You'll never seek to gain.

But, to that word two letters more
Attach, and you will find
A far more genial *third* in store,—
One suited to your mind.

My *last's* a very little word,
Though great its pow'rs may be,
For he who owns it has command
O'er things on land and sea!

My WHOLE's a title none may wear,
Who don't deserve the name;—
We honour those that title bear,
For men, they are, of fame.

The humblest may entitled be,
By actions kind and true,—
To win this honour,—don't you see?
And so may *I* and YOU.

Cryptograph.

2.

Ittaeaee, t eihi tttaeaee oi tee xd itatohaii!
Ooni ni ooa iotoa it xth. Oi-ntd oa bnoi titoo
Ooa oahnat eatlai it oibia; oi-xittie heiiiixi,
Thn hatti oni henionhi oihinti oonel nbih onx.
Ooa oontn ntd eixai t ttiio, t lneenhi ttiio;
Thn eoah oa oonhli, iiin atid xth, tnee intaed
Oni itatohaii ni t-tn bahnhi, hnbi oni tiio;
Thn ooah oa tteei, to n ni.

3.

A lovely flower in water grown,
Th' *initials* of these words make known;
That ancient land the *finals* state
Wherein this flower was counted great.

1. In woman's clothes this hero flees;
2. A German state by northern seas;
3. An English battle known to fame;
4. And then a common adverb name;
5. A French commander's name recall,
   Whose deeds and name are known to all.

Battles.

4. Four-fifths of to mix, a pronoun, and two-thirds of a sprite.

5. A vowel, a trap, and a residence.

6. Half a flag, a rap beheaded, and four-fifths of a poet.

7.

I'm in everyone's way, yet no one I stop,
My four horns each day, horizontally play,
And my head is nail'd on at the top.

8.

My first is a measure, by no means uncommon;
My second a weight that three letters express;
My whole an attendant on each man and woman,
Forming a requisite part of your dress.

9.

What word in the English language is that which is composed of *six* letters only, but which possesses *three* syllables (half of its letters being consonants and the other half vowels), the four first letters of which form a distinct word, signifying individual letters of the alphabet, and the complete word of six letters of the whole of them taken collectively; whilst the first five letters form another word as a verb in the infinitive mode, which means to join together, but which by a transposition of the vowels forms still another word of an exactly opposite signification?

Word Squares.

10.

A way.
Assent.
A Latin noun of negative form.
A patriarch.

11.

A river.
A publisher.
A town in Wales.
An adverb.

12.

Past tense of a verb.
A measure.
To fetter.
To notch.

Transpositions.

13. Mag, encore tunes.
14. Queer togs.
15. Send their meat.
16. Insect Queens.
17. Listen, poor paid Tory.
18. Cure ham capitally.

19.

My whole is a spell; transpose, and I am one of the months of the year; behead, and I am part of a circle; transpose, and I am a fish; take away one of my letters, and I am a vehicle.

20. My *second* belongs to my *first*, and my *whole* is a fish.

Cryptograph.

21.

Xvoudn6 moap 5i 2iod kir qoap 6ibu xtvapuv ton;
Ptb7ha od btndu66 ptn Hi7idor6 67tod:
Tdn xvid po6 biapuv'6 mi7i6u ptap pu not55un pob:
5i, 6rry pob ira; 6 huty xt2v, pdn mwod5 apu mink:
Odai apu 4ptpw7. O hotk kir pt6au od apo6.

22.

Arrange seven lakes of a country of Europe so that the *initials* make another country of Europe.

23.

A cover.
One.
A resound.
A blow (curtailed).
A river in England.
Bury.
A precious stone.
A river in England.
An adverb.
To obtain (curtailed).
A town in Russia.
Faith.
A master.
A Turkish priest.

The *initials* read down will give the name of a novel, and the *finals* read upwards its author.

24.

Part of bush.
Extreme.
Grow.
A bird of prey.
Heroic.
A pronoun.

The *initials* and *finals* read down will give the name of two countries in Europe.

Arithmorem.

25.

1. 2100 + hate shy run = a flowering plant.
2. 101 + O, rot = a kind of French tax.
3. 50 + E saw E = a small animal.
4. 1051 + In a trap = the council of the nation.
5. 100 + hoe = to reflect sound.
6. 1000 + Roan = a native of Rome.

Two celebrated poets.

Hidden battles.

26. Didn't you call me dear?
27. All lambs are queer pets.
28. Will you buy this orange, Kate?
29. Bring me my bay horse.

30.

My *first* is equal; my *second* is to decay; my *whole* is a bird.

31.

An old English town.
An island off the eastern coast of Greece.
An ecclesiastic.
A lake in the United States.
A country of Asia.
A North American lake.
Genuine.

The *initials* name a poet, and the *finals* an artist.

32.

My *first* is an equine motion; my *second* is to inter; my *third* is sonorous; and my *whole* is a flower.

33.

My *initials* name a poet, my *finals* one of his poems.

A feast.
A common.
A river.
Hair.
First of the dead.
River.
A head-piece.
An animal.
Stubborn.
A county.

34.

My *first* is infuriated, my *second* is an article, my *third* gives light, my *fourth* is a vehicle, my *whole* is a large island.

35.

Word Squares.

Splendour.
Across.
A lake.
Plunder.

36.

A tree.
A surface.
Meagre.
Numerous.

37.

Elegant.
Everyone.
The height of.
At that time.

38.

To watch.
At any time.
A Roman emperor.
To fall.

39.

To flog.
A skin.
Lazy.
A noble.

40.

I am a word of nine letters, and a fruit.

My 8, 7, 1, 9 is a number.

My 3, 5, 4 is an animal.

My 4, 5, 6, 2 is a plant.

Hidden Countries.

41. My father was blind; I am deaf; and my son is dumb.

42. I take in the *Young Gentleman's Magazine*, which I like very much.

43. Talking in whispers, I always condemn.

44. In his recital you may easily detect many discrepancies.

45. I am sorry we shall have to quit our old home.

46. Our bull ran at all persons who presumed to tease it.

47. The one which I name here is a very easy puzzle to solve.

48. In short, I betray no one's secrets.

49.

Why was the battle of Waterloo like the letter G?

50.

Cryptograph.

Mmv azkd qsgkj dtdlhlf onm ymb suhjhegr fptw
Gyc gm fdp rmacq jhtdpx ykj sfhlfg bjzb
Rgkcmad ybankoymgdc emqzdyrr zlc zhpc
Sfdw sm sfdgg egyrqx ansbf sfdgd rn rgchp mc rr
Vcgc rjtlj ykj ass rgc vyjcesk lhegrhlfykc
Rfd ykj mgffs jnlf fap zknpnsr bdgbymr rsme
Rgkcmad uzq ojdyrcc.

Kronheim and Co., *London.*

GOLFING.

THE GAME OF GOLF.

WHAT chess is to draughts, what billiards is to bagatelle, what cricket is to trap-and-ball, so is golf to hockey. It is a game of skill, judgment, and science. It takes the player to breezy moors and healthful commons; it exhilarates without fatiguing him. From a Scotch point of view, it is the game of all games, and Scotchmen particularly excel at it. And so they should. It is, *par excellence*, their national game, and until the past few years was unknown out of the "land o' cakes." Now, where Scotchmen dwell (and where do they not?) golf has become naturalized. You can witness the play on Blackheath, and it is not unknown within the shadow of the smoky pennons of Manchester. I have seen it played on the sandy plains which stretch westward of Liverpool; but its home is on the links and inches of the land of the blue-bell and the heather.

I well remember that inspiriting day when I accompanied those two old friends, members of the renowned and ancient club of St. Andrews, to witness their sport and to receive a few practical lessons on the art of avoiding *hazards* and getting out of a *bunker*. I well remember the smile of the attendant *caddie* as I swung the play-club as if I was going to send the ball the famed ten score yards, and only succeeded in "*topping*" it after all. It requires practice and patience to acquire the "far and sure" stroke which is the motto of the best golf-players.

"But what is golf? what is a play-club? what is a bunker?" I hear the Southron laddie say. He may have a glimmering notion of a *caddie*

and of a *hazard*, but that glimmer will not aid him much. I will, however, strive to make the game of golf, as played by the best players, clear; merely premising that the practice of the game should be commenced under a professional player, and there are several in the neighbourhood of Blackheath, Manchester, and Liverpool. By thus beginning, a good style is insured, which will be very difficult to forget. In Scotland, wherever there is a golfing-ground, there professional instruction will assuredly be found. It is a game that kings have played at; and our king of English gentlemen, the Prince of Wales, has not disdained to follow their example.

Come, then, to the sandy links, as they are called. Their fellows in England are the undulating downs and grassy commons, a plain of fine green turf, diversified by knolls, furze-bushes, tufts of grass, hollows, and, may be, cart-ruts or pools of water. These form in golfer's parlance *hazards*, which are to be avoided if possible. The *caddie* is but the Scotch term for club-bearer, and he carries the somewhat miscellaneous appliances which the game demands.

On reaching the ground, the first operation is (if the ground is not kept in order by an established club), to cut a series of circular holes in the turf, some four inches in diameter and some six or seven inches deep. These holes are placed at various distances according, to the nature of the ground and intervening obstacles or hazards; but, whatever the distance apart, they are placed in the centre of a piece of open sward known as the "putting-green," and not less than twenty yards from the nearest hazard. If the ground be broad and wide, the holes are placed on a "round," from one hundred to five hundred yards apart, according to the nature of the ground. At St. Andrews there are eighteen holes in the "round" of the links, and once round is reckoned a match; but sometimes the players agree to play a match twice round. If the ground is oblong in shape, and the holes are necessarily placed at each end, it is still called a round; and the game is begun by two, three, or four players each striking a ball from the *teeing*-ground near the first hole in the direction of the second hole. The *tee* is a small pinch of sand on which the ball is laid at the commencement of the game, and in certain other conditions, but not nearer the hole than six club lengths.

Before, however, the game can be understood, some idea must be formed of the implements with which the game is played.

The *Ball* is made of gutta-percha, about two inches in diameter, and painted white, so as to be easily seen. Formerly it was made of leather, stuffed hard with feathers. The price is about a shilling.

The *Clubs* are, however, the most important portion of the golfer's outfit. They are as various as the days in the week, and no good player would begin without a set of at least half a dozen. A fastidious player on an unknown ground would at least have half as many more, and would display with pride his (1) *play-club*, (2) *long spoon*, (3) mid-spoon, (4) *short spoon*, (5) baffing-spoon, (6) driving-putter, (7) *putter*, (8) *sand-iron*, (9) *cleek*, (10) *niblick*, or track-iron. Those most useful in ordinary play are printed in italics: indeed, the ground must be very difficult and full of hazards to require them all. With the exception of the last three, the clubs are made of a long shaft of hickory or lancewood spliced to a tough head made of thorn-tree, apple-tree, or pear-tree. The head is faced with horn, and heavily weighted behind with lead to give it leverage. The last three are fitted with a socket to hold the shaft. The place where the player grasps the shaft is covered with leather, to avoid the possibility of the club slipping. As a rule, the play-club is made some forty-five inches long; but is varied to suit the height and fancy of the player. The putter, and those clubs used for short distances, are from six to eight inches shorter than the play-club.

These clubs—for they all come under that generic name—are put to a variety of uses. The *play-club* is used for *swiping*, or driving the ball off the *tee* at the commencement of a game. The face of the club is square, and it can only be used with effect when the ball is on the *tee*, or on a level sward a long distance from the next hole. If the ball rests on a hollow, amidst rough grass or on uneven ground, then the *long spoon* is used. The face of this club is slightly hollowed or "spooned;" so that it strikes the ball nearer the earth, and elevates it so that it flies over the obstacles opposed to it. In this case the play-club would be comparatively useless.

Putter.

Play Club.

The *mid-spoon* is used for the same purpose, for short distances only. When near the hole, the *short spoon* comes into play: indeed it and the

shorter *baffing-spoon* are used to *elevate* the ball for short distances only. As the *cleek* answers the purpose of the latter, it is generally used in preference.

The *putter* is more like the play-club, only it is shorter and stiffer. The head is larger, with a flat face. It is a club that the croquet-player would appreciate, for it comes into use when the ball lies on the *putting-green* within, say, eighteen or twenty yards of the hole. To *put* well is the acme of the golfer's skill, for it requires both steadiness of eye and certainty of hand. The judgment has to be brought into play to administer sufficient force to carry the ball over the stiff grass

Spoon.

Sand Iron.

and untoward bents which will persist in checking its progress at the last moment. If the player could insure the ball falling in pleasant green places, the foregoing clubs would suffice ; but balls will fall at times in *bunkers*, as sand-holes are called, or fall in the whin-bushes, among the rushes and long bents, or among the rough stones of a road. Then the *sand-iron* is required. Its sharp, straight edge, slightly-hollowed face, which leans slightly backward, assists the player in releasing his ball from the hazard and casting it again on the turf.

The *cleek* is a straight-faced iron club, with a longer shaft than the

Cleek.

Niblick.

sand-iron. It is useful for driving balls over intervening obstacles lying between the ball and the hole near the putting-green. It is a favourite club with most short-distance players, who use it with effect in what are termed quarter-strokes.

The *niblick*, sometimes called the track-iron, is a heavy circular shallow iron cup, fixed at a sharp angle to a long shaft, yet, like the cleek, slopes slightly backwards. It is used to drive the balls from deep hollows, cart-ruts, or from among the stiff coarse stems of the furze or whin-bushes. Thus in effect the *cleek*, *putter*, and *play-club* present flat surfaces to the ball; the *cleek* alone is placed at a slight slope backwards. All the other clubs are hollowed or spooned, and are made for the special purpose of lifting the ball out, or "lofting" it over difficulties, obstacles, or *hazards*.

It is by no means impossible for a person unacquainted with the game to learn to play, even without the advantage of a few practical hints from a skilled or professional player, if he does his utmost to acquire a good style of swing and grasp of the club, and pays close attention to the rules. We will now suppose the tyro is standing on the link, with the ball on the tee, six club-lengths from the first hole. The caddie hands him the play-club, and shows him how to grasp it. The right hand is placed beneath the left, as shown in the engraving, and the shaft of the club rests in the hollow between the palm and the fingers, and is held free but firm. The wrists and arms must not be constrained; the jacket or coatee should allow fair play to the movements of the body as the club is brought over the right shoulder in the attitude to *swipe*. The young player should practise the attitude gently and quietly, until he becomes used to the swing without touching the ball. Mere strength, it should be remembered, is not required. The ball when struck should be struck fairly by the head, and not with the "heel" or "toe," of the club, which will cause it to fly right or left as the case may be. There are some skilled golfers who can drive a ball eight or ten score yards; but this feat the new player should not try to emulate. The club should describe about three-fourths of a circle, and if the ball is fairly caught, and not "topped," it will take a straight course of some fifty or sixty yards over the links towards the second hole. There must be no hurry—no brute strength; the eye must never leave the ball until it goes onward in its course.

The *attitude* must also be considered, and the distance from the ball taken into account. The feet should be some eighteen inches apart, and the left foot about thirty inches from the ball. A little practice will soon enable the player to ascertain the right distance; and though

at first the tyro "misses the globe," "tops it," or "hooks it" with the toe and sends it flying to the left, or "heels it" to the right, a good driving stroke is not very difficult to acquire. The subsequent niceties of the game are far more difficult, though seemingly more easy.

On reaching your ball, if it lies on the open turf, you may repeat the long swipe with advantage if you are not too ambitious. If in a sand-hole, you will require your sand-iron; if in a hollow of the turf, the long spoon; if in a rut, the niblick. You will find the bunker, or sand-hole, a hazard to be avoided rather than courted. It will require patience and *perseverance* ere the ball can be driven from its snug retreat on to the turf at one stroke. A good deal of patience will also be required to drive the ball with the long spoon over that tuft of whin-bushes which grows so provokingly between your ball and the putting-green. At length your ball lies on the green itself, and the hole is temptingly near. You now want judgment and nicety of touch. You have to consider, not only the distance between your ball and the hole, but the possibility of a *steimy*.

A *steimy* is an ugly affair for a beginner, and it occurs when your antagonist's ball lies in a direct line between your hole and the ball, so that *putting* is out of the question. There is no other course open but to take the sand-iron and "loft" your ball over the *steimy* into the hole if you can. *Steimies* are sometimes played purposely, but it is not considered exactly fair to play them; but, whether played purposely or not, they often occur, and the young player should practise "lofting" with a view to overcoming *steimies* when they occur. Even without this obstruction, he has to consider the necessary strength to drive his ball safely in. He must also consider the nature of the intervening ground, whether up-hill or otherwise, and the best way of overcoming the difficulty. "To put" well ought to be the aim of every beginner; and, as he can practise it on any greensward, it is his own fault if he does not succeed.

Having holed his ball, the tyro repeats the same manœuvre towards the next, and so on, until he makes the round, when the game is usually ended. The *points* in the game are obtained in holing the ball in a fewer number of strokes than your opponent. The game is sometimes played so that he who makes the fewest strokes in a round wins, without regard to the number to each hole; or, at other times, he who holes the greater number of times is the conqueror of the day. Handicapping is practised, too, when one player is notoriously inferior to the other, either by giving one or two strokes to the round, or one or more strokes to each hole, according to circumstances. Throughout the

game he who wins the ball which lies furthest from the hole he is approaching plays first. In commencing the game, *the honour*, as it is termed, is given to the senior member present, or the captain of the link or club, as provided for in the rules.

As no directions for golfing would be complete without the club rules, we have tried to procure several, with a view of choosing those best adapted for young gentlemen. We found that, almost universally, we were referred to the rules of the "Royal and Ancient Golf Club of St. Andrews," which are as follow :—

"1. *Mode and Order of Playing the Game.*—The game of golf is played by two persons, or by four (two of a side) playing alternately. It may be also played by three or more persons, each playing his own ball. The game commences by each party playing off a ball from a place called the *tee*, near the first hole. In a match of four, those who are opposed to each other, and to play off, shall be named at starting, and shall continue so during the match. The person entitled to play off first shall be named by the parties themselves; and, although the courtesy of starting is generally granted to old captains of the club or members, it may be settled by lot or toss of a coin. The hole is won by the party holing at fewest strokes, and the reckoning of the game is made by the terms *odds* and *like*, *one more*, *two more*, &c. The party gaining the hole is to lead, unless his adversary has won the match, in which case the adversary leads off, and is entitled to claim his privilege, and to recall his adversary's stroke should he play out of order. One round of the links, or eighteen holes, is reckoned a match, unless otherwise stipulated. If, in a double match, one person shall play twice in succession, he loses the hole."

Perhaps there are many to whom the terms *odds*, *like*, *one more*, *two more*, &c., have no meaning. Let me explain. These terms only occur when the match is given to the winner of the greatest number of holes in a round. Thus, when one is about to play the same number of strokes as his opponent, he is said to play "*the like*," if he plays one stroke more it is called "*the odds*," if two strokes more "*two more*," if one less it is called "*one off two*." This is very puzzling to beginners, but it is the nomenclature of golfing courses. Here are a few examples from a golfer's "rambling remarks" :—

Example 1. A has played 3 strokes, B has played 2 strokes, and lies behind A, B then plays his 3rd to A's 3rd, or *the like*.

Example 2. A has played 3 strokes, B has also played 3 strokes, but still lies behind A. Following the rule, B then plays his 4th to A's 3rd, or *the odds*.

Example 3. B has played 5 strokes, A has played 6 strokes, and still lies behind B. A then plays his 7th to B's 5th, or *two more.*

Example 4. B has played 7 strokes, A has played 5 strokes, and lies behind B. A then plays his 6th to B's 7th, or *one off two.*

Example 5. B has played 9 strokes, A has played 5 strokes, and lies behind B. A plays his 6th to B's 9th, or *one off four.*

Example 6. A plays *the odds* and holes his ball. B plays *the like* and holes his ball. The hole is halved. When players are equally matched, it frequently happens that *a round* is played without either party gaining an advantage: the holes being halved each time. When one gains a hole before the other, he leads off, or has *the honour* of striking off towards the next hole.

"2. *Place of Teeing.*—The ball must be teed not nearer the hole (either in front or side of the hole) than six club-lengths, and not farther from it than eight; and, after the balls are struck off, the ball farthest from the hole to which the parties are playing must be played first. When two parties meet on the putting-green, the party first there may claim the privilege of holing out; and any party coming up must wait till the other party has played out the hole, and on no account play their balls up, lest they should annoy the parties who are putting. No player may play his teed ball till the party in front have played their second strokes."

"3. *Changing the Balls.*—The balls struck off from the tee must not be changed, touched, or moved before the hole is played out (except in striking, and the cases provided for by rules 8, 18, and 19); and if the parties are at a loss to know one ball from another, neither shall be lifted till both parties agree."

"4. *Lifting of Break, Clubs, &c.*—All loose impediments within a club-length of the ball may be removed on or off the course when the ball lies on grass (see rules 6 and 12). When a ball lies in a bunker or sand, there shall be no impression made, no sand or other obstacle removed by the club or otherwise, before striking at the ball. When a ball lies within a club-length of a washing-tub, the tub may be removed; and when on clothes the ball may be lifted and dropped behind them."

[It is almost needless to point out that this rule refers to the Scotch and indeed the Irish fashion of washing clothes by a burn or rivulet, and drying and bleaching them on the adjoining grass.]

"5. *Entitled to See the Ball.*—When a ball is completely covered with

fog, bent, whins, &c., so much thereof shall be set aside as that the player shall merely have a view of his ball before he plays, whether in a line with the hole or otherwise. A ball stuck fast in wet ground or sand may be taken out and replaced loosely in the hole it has made."

"6. *Clearing the Putting-green.*—All loose impediments of whatever kind may be lifted on the putting-green, or table-land on which the hole is placed, which is considered not to exceed twenty yards from the hole. Nothing can be lifted either on the course or putting-green if it is to move the ball out of its position."

"7. *Lifting Balls.*—When, on any part of the course, or off it, or in a bunker, the balls lie within six inches of each other, the ball nearest the hole must be lifted till the other is played, and then placed as nearly as possible in its original position, the six inches to be measured from the surface of the balls. In a three-ball match, the ball in any degree interposing between the player and the hole on the putting-green, must be played out."

"8. *Ball in Water, or in the Burn, and Place of Re-teeing.*—If the ball is in water, the player may take it out, change the ball if he pleases, tee it, and play from behind the hazard, losing a stroke. If the ball lies in any position in the burn across the first hole, the player may take it out, tee it on the line where it entered the burn, on the opposite side from the hole to which he is playing, and lose a stroke ; or he may play it where it lies without a penalty. However, should a ball be driven into the Eden at the high hole, or the sea at the first hole, the ball must be placed a club-length in front of either sea or river, the player or party losing a stroke."

[The reference to the river Eden and the sea has, of course, a local application only. At Aberdeen the game is frequently played on the inches or sand islands at the river's mouth.]

"9. *Rules of the Green.*—Whatever happens to a ball by accident, such as striking any person, or being touched with the foot by a third party, or by a fore-caddie, must be reckoned a rub of the green, and submitted to. If, however, the player's ball strikes his adversary, or his adversary's caddie or clubs, the adversary loses the hole ; or if it strikes himself, or his partner, or their caddies or clubs, or if he strikes the ball a second time while in the act of playing, the player loses the hole. If the player touches the ball with his foot, or any part of his body, or with anything except his club, or if he, with his club, moves the ball in preparing to strike, he loses the hole. But if he plays it inadvertently,

thinking it is his own, and the adversary also plays the wrong ball, it is then too late to claim the penalty, and the hole must be played out with the balls thus changed. If, however, the mistake occurs from wrong information given by one party to the other, the penalty cannot be claimed; and the mistake, if discovered before the other party has played, must be rectified by replacing the ball as nearly as possible where it lay. If the player's ball be played away by mistake, or lifted by a third party, then the player must drop a ball as near the spot as possible, without any penalty. Whatever happens to a ball on a medal-day, such as a player striking his caddie, or himself, or his clubs, or moving the ball with his foot or club, or his caddie doing so, or the player striking it twice before it stops motion, the player, in such cases, shall lose one stroke only as the penalty."

"10. *Ball Lost.*—If a ball is lost, the player (or his partner in a double match) returns to the spot, as near as possible where the ball was thrown, tees another ball, and loses both the distance and a stroke. If the original ball is found before the party has struck the other ball, the first shall continue the one to be played."

"11. *Club Breaking.*—If in striking the club breaks, it is nevertheless to be accounted a stroke if the part of the club remaining in the player's hand either strike the ground or pass the ball."

"12. *Holing out the Ball.*—In holing, no mark shall be placed or line drawn to direct the ball to the hole; the ball must be played fairly and honestly for the hole, and not on your adversary's ball, not being in the way to the hole; nor, although lying in the way to the hole, is the player entitled to play with any strength upon it that might injure his adversary's position, or greater than is necessary honestly to send your ball the distance of the hole. Either party may smooth sand lying around the hole; but this must be done lightly and without pressure, or beating down with the feet, club, or otherwise."

"13. *Unplayable Balls.*—In match making, every ball must be played wherever it lies, or the hole be given up, excepting when it lies on clothes, in water, or in the bed of the burn (see Rules 4 and 8), or in any of the holes or short holes made for golfing; in which latter case it may be lifted, dropped behind the hazard, and played with an iron without losing a stroke. In *medal*-playing, a ball may, under a penalty of two strokes, be lifted out of a difficulty of any description and teed behind the hazard; and if in any of the golfing-holes, it may be lifted, dropped, and played as above without a penalty. In all cases when a ball is to be dropped, the party doing so shall front the hole to which

he is playing, standing close on the hazard, and drop the ball behind him from his head."

"14. *Medal-Days.*—New holes shall always be made on the day medals are played for; and no competitor shall play at these holes before he starts for the prize, under the penalty of being disqualified for playing for the medal. On medal-days, a party starting off from the tee must allow the party in front to cross the burn before the strike off. All balls must he holed out on medal-days, and no steimies allowed."

"15. *Asking Advice.*—A player must not ask advice about the game, by word, look, or gesture, from any one except his own caddie, or his partner's caddie, or his partner."

"16. *Disputes.*—Any dispute respecting the play shall be determined by the captain or senior member present; or, if none of the members are present, it shall be settled by a committee appointed by the parties interested, or by the captain and his annual council for the time, at their first meeting."

"17. *Parties Passing Each Other.*—Any party having lost a ball, and incurring delay by seeking for it, shall be passed by any other party coming up; and on all occasions a two-ball match, whether by two or four players, may pass parties playing three or more balls. Also parties having caddies may pass those carrying their own clubs."

"18. *Balls Splitting.*—If a ball shall split into two or more pieces, a fresh ball shall be put down in playing for a medal without a penalty, and likewise in a match, on the penalty of one stroke."

"19. *Breach of Rules.*—Where no penalty for the infringement of a rule is specially mentioned, the loss of the hole shall be understood to be the penalty."

"20. *Repairing the Links.*—The person appointed to take charge of keeping the links shall make new holes every Monday morning, and in such places as to preserve the putting-green in proper order."

The Paper Chase; or, Hare and Hounds.

A GREAT authority on field sports and out-door amusements in general has remarked, "the exuberant energies must have vent, and the gallant spirits of the present day would rather be really dead than thought to be 'dead slow.'" During the winter months, with the exception of football, there is no playground game for schoolboys, and unhappy indeed are they whose fate it is to be compelled to remain within the prescribed limits, inactive and unemployed. One cannot be playing football every day—shins and toes would never stand it. And, even supposing it possessed all the attractions of cricket—a game of which one never tires—the weather alone would present an insuperable obstacle to its entire success, and its votaries would always be fewer than in the sister game, from the fact of there being a far smaller attendance of general spectators.

All honour to the genius who invented the "hare and hounds." Let agriculturists say what they will in contravention of my opinion, but nevertheless I record it deliberately, that that man was a benefactor to his kind. We can imagine, I think, with what infinite zest the earlier runs in this remarkable sport were entered into, and what celebrities the chief actors therein became among their fellows. The introduction of the "hare and hounds" must have proved a welcome relief enough to the dull monotony of those previously condemned to lead a life of football during the winter months. And not less welcome than necessary was its institution, if anything like a creditable exhibition is to be annually made in the spring and summer in pedestrianism and cricket. Most schools of any note in the present day boast an athletic tourney during the season. And assuredly not few, who dis-

tinguished themselves in the principal events, may fairly attribute not a little of their success to the fact of their having taken a leading part in many a "hare and hounds" in the winter.

But this is not to the purpose. Of the origin, or of the desirability of "hare and hounds," as an institution, I have nought to write here, but must proceed to give a description of a chase as it actually occurred.

It will be unnecessary, perhaps, to say that we were public school-boys, for it is only at great schools that this sport is to be enjoyed in its true excellence. The particular run to which I am about to direct attention was a very celebrated one, extending as it did over a most trying country, plentifully diversified with hill and dale, and in some parts "holding" to an extent that prevented the faint-hearted, who had had experience of its qualities, from joining the meet.

We had had early school in order to be at the trysting-place at an hour sufficiently early to enable us all to be in quarters again by preparation time, though, certainly, we ran no inconsiderable risk of losing our tea. That was a consideration, however, which had weight but with very few; and so tempting was the prospect of eggs and bacon at the finish, for all who could be up at the specified time, that, so far from proving a deterrent, it may safely be said to have been an instigation, enabling, as it did, each respective votary who ran it, to remain out a longer time than usual. Our house-masters, too, had obligingly allowed all who intended joining the chase to regale themselves with sandwiches and ale immediately after school, which certainly was better than starting off upon such an arduous undertaking as ours after the usual heavy dinner.

Care had been taken to apprise mine host of the "Plough" of the intended raid upon his larder, and of the precise time at which the savory compound must appear upon his table. Punctuality on the part of his guests could always be relied on, and I believe the worthy host never had occasion to complain of a due want of appreciation of his fare. And, although the banquet was supposed to be provided specially for the hares and so many of the hounds as "finished" within twenty minutes after the hares had reached home, there was no restriction placed upon those who dropped in afterwards, and were content to undergo the certain ordeal of chaffing in consideration of the fag end of the repast.

As this was one of the hardest runs of the country two of the best runners in the school were chosen for hares. And the choice fell upon them not only out of regard to their pedestrian powers, but also, and particularly, because of their knowledge of the country and of the

inhabitants. For, be it known, the farmers in the district were by no means partial to these diversions, and indeed had gone so far in their positive detestation of them as to have said they would put a stop to them by main force.

Our hares were each provided with two stout bags containing a large quantity of paper torn into fragments—to which every old exercise-book, magazine, and newspaper that could be laid hands on had lent its aid—to serve the purpose of scent. Ten minutes' law was allowed them, and they were "turned down" at the appointed time, about half a mile from the school in a meadow adjoining the property of one of the principal malcontent agriculturists.

Although every hound knew full well the line of country and where the wind-up was to be, not one ever thought of shirking the scent, or, more correctly, of not running the line of his hare. True, he might incur ridicule for turning up beyond the prescribed time, and have to undergo the other inevitable infliction alluded to, but it was a point of honour among us either to cut it fairly when we had had enough, or to brave the worst. And this quite as much a matter of necessity as of honour, I may remark; for if any should be tempted to cut corners he was almost sure of detection at the hands of some straggling small boy, who would not fail to make the most of such valuable information when opportunity offered.

The meet was the largest of the season, and numbers put in an appearance who were not generally present on such occasions, actuated as they were by the double motive of its being the last meet of the season, and of the feed. The Captain of the Eleven—whom for the sake of convenience I will call Wilson, not that his real name bore the slightest approximation to that patronymic—stood, watch in hand, until the allotted ten minutes had elapsed, and then the hounds were laid on to the invigorating shout "Forward!" The scent lay very thick (or should I say the scent was breast high?) for the first quarter of a mile or so, in consequence of the uncertain route through the enemy's country; and, as there was little or no skirting for the line, there was no perceptible shaking off of the half-breds.

Through four several meadows and up a fearfully slushy lane we had now pounded, when suddenly Wilson and his more immediate followers were seen making a cast ahead for scent which was now growing thinner. Cunning fellows our hares were, and game as pebbles withal. They failed not to avail themselves to the utmost of the very liberal amount of law they had received, and well knowing their superiority in point of wind and endurance they led us a far more circuitous route than

would have been necessary even had the farmers shown up in force against us.

"Forward, forward!" at length again shout the leaders as a clear line of scent is again viewed straight across a down on which are innumerable ant-hills, which prove very embarrassing to the stride.

A tremendous drop-fence being cleared into the turnpike, which is ankle-deep with pomatum-like mud, down which the hares, as a matter of course, led us some distance, and over a stiff thickset, we are at length in the trying part of the run. The land is ploughed, and here is "the tug of war" with a vengeance. Most had borne up bravely until now, but here occurred a most effectual thinning of the field.

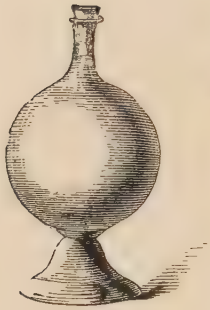
Before landing again on practicable ground we had a terrible ox-fence and a ditch to clear, and into this last very many of those who had contrived to flounder through the ploughing came to irremediable grief. Many were the casualties too that occurred there, and on every side were heard the cries of woe.

"Hi! Smith, give us a leg out of this, old fellow!" "Here, I say, hold hard a minute till I get my shoe!" and rising high amid the surrounding din the constant shout of Wilson and his crew of "Forward! forward!"

But eight or ten were left now to continue the chase. The last fence had done its work, and so cunningly had the leaders pressed the hounds across the ploughing, that it was clear the feed—at least the honours and cream thereof—would be enjoyed but by a select few. The line was now no longer followed by what may be called the field, and with the generality it was *Sauve qui peut*. The scent was growing worse, and at last disappeared entirely. But so good were the hares, and so well had they timed their movements that presently they burst into full view just as the last vestige of scent was discoverable, rounding the top of a stiff ascent straight in front, from which commenced the run in for the last half-mile to the "Plough." "Tally ho!" given with a strength of lung that might have shamed the stoutest foxhunters of the side, burst forth in front, and put fresh life into the remnant of the drooping hounds. The hill had yet to be breasted, and proud were they, and lucky too, who had, upon gaining the summit, preserved wind enough for a creditable run into the village.

"Keep a trot for the town, yer honour," is the Irish carman's advice in Jehuship; but it was a sorry trot that most of us made, notwithstanding the cheers of the villagers, who had turned out in force to witness the wind-up of the "collegers" in their celebrated "last run of the season." The distance as the crow flies was not more than six miles, but we must

have traversed certainly not less than nine at least. This was accomplished by the leading hounds in one hour and a half, and considering the terribly heart-breaking nature of the ground, and the cruel trick of the hill at the finish, the time may be considered very fair. A shandry-dan was chartered by the landlord for our conveyance from the field of our fame; the stragglers all either turned up at the "Plough" or were picked up on the way home, and the villagers again cheered our departure and accompanied for some distance our triumphant return from the most celebrated run of our "hare and hounds."



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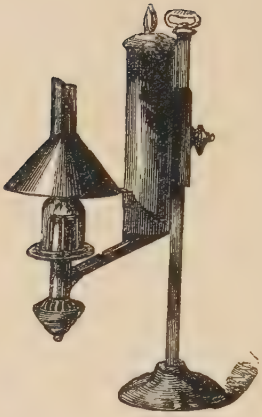

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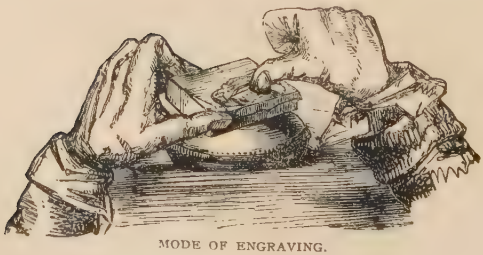


MODE OF ENGRAVING.

WOOD ENGRAVING.

Trades connected with Science and Art.

By THOMAS ARCHER.

WOOD-ENGRAVING.

WOOD-ENGRAVING may be said to have been the earliest sort of printing since the ancient Egyptians made use of blocks of wood with hieroglyphics, cyphers, or the figures of birds and animals carved upon them,—as stamps or seals to impress the same figures upon clay, which was afterwards dried into a kind of brick. Some of these bricks, as well as the wooden stamps used for making them, are still in existence, and the stamps are even now capable of printing the design carved for them upon paper as well as upon any soft material like wax or clay. Several of these bricks may be seen in the British Museum.

In our description of the invention and practice of printing, it mentioned that the earliest *types* were blocks of wood, and that the ar of printing in this way was known in China long before it was adopted in the countries of Europe. Perhaps the earliest attempt at printing even among the Chinese was made by cutting letters in stone, so that when they were transferred to the paper the letters themselves were white and the groundwork black ; but this method was soon changed for the use of wooden blocks on which the groundwork was cut away, leaving the characters *in relief.* In fact, the wood blocks became *types ;* and the art of printing by moveable metal types, each containing one letter, was but a great stride in the invention of which the old pear-tree wood blocks of the Chinese seem to have been the beginning.

We have already said the first use of wood-engraving—and therefore the first examples of printing in Europe—was for the manufacture of playing-cards, and the place in which these cards were first made was probably Nürnburg, in Germany ; and as cards were known in France

as early as 1340, and the use of them was forbidden by John I. of Castile in an edict dated 1380, they were probably produced at the beginning of the fourteenth century. At all events, at the latter date (1380), we find cards mentioned among the games permitted to the citizens of Nürnburg; and a few years later, in 1418, the list of the burgesses of Augsburg contains the name of a cardmaker; so that their manufacture had become an acknowledged trade, which soon grew into a very large branch of industry when improvements in the art of printing from the rude woodcuts made it easier to produce them in greater quantities. There could not be a much better example of the style of these old wood blocks than a playing-card even of our own time; for, singularly enough, except in a few instances, modern card-printers have preserved the ancient style, and the present knave of clubs is not by any means unlike the knave of bells of the cardmakers of Augsburg, Nürnburg, and Ulm in the fifteenth century.

The adaptation of the wood block to the production of pictures for books soon followed; but the earliest known woodcut or picture printed from a wood block, is one still in existence, and is dated 1423. It was found pasted on the cover of a manuscript in the library of the convent of Buxheim, near Memmingen, in Suabia, and represents St. Christopher carrying our Saviour on his shoulders across a river. The figures are well drawn; but there is a strange ignorance of perspective in the scene, and the execution is of course rude. There are other pictures of the same kind, and perhaps as old, still in existence; for the art of wood-engraving once established, it was soon used as a means of bringing pictures of Scripture history before the poor who were unable to read; and some of these old woodcuts, though rough and even grotesque in execution, were coloured by hand, in imitation of the more costly illuminations of the manuscripts then in use, and were frequently the means of imparting some knowledge to the ignorant part of the people. One of the first purposes to which wood-engraving was applied seems to have been the production of maps. There are twenty-seven of these maps in an edition of Ptolemy published at Ulm in 1482; and in another edition of the same book, printed at Venice in 1511, the outlines of the maps, with the mountains and rivers, are printed by the wood block, while the names of the places are inserted by means of type, and are printed in two colours. Great improvements in the art of engraving on wood had been made by that time, the principal of them being that called cross-hatching, by which the proper shading and filling in of the figures is effected. The original wood-engravings were little more than rude outlines; but this invention, which is said to have been

due to Michael Wolgemuth, master of Albert Dürer, gave a new life to this most useful art. It was to Dürer himself, however, that wood-engraving owed its rapid progress; for this great artist, besides being a painter, produced such a large number of engravings on wood as well as on copper, that it was thought they could not all have been the work of his own hands.

Early in the sixteenth century a number of celebrated artists took up the practice of wood-engraving, and the great Holbein designed, if he did not engrave, some celebrated pictures on the wood. The invention of printing gave a new value to this kind of engraving, since it was found that the wood block could be placed among the moveable types containing the letters, and that by this means a picture could be printed in the middle or at the top or bottom of a page, just where it was required.

For some time, however, though wood-engraving became more common by its introduction into books in this way, the style and execution of the pictures rather declined than improved. The invention of printing seems to have opened such a vast field of instruction, that the people cared less for the pictures than for the books themselves. Gradually, however, the artists, especially in Italy and in England, again began to devote their attention to these illustrations; and though no very important improvements in the method of engraving took place, woodcut pictures in books became very general, and many of them were executed with remarkable skill.

The man who took the greatest part in raising the art of wood-engraving as it is now practised was Thomas Bewick, whose pictures in the "History of Quadrupeds" and the "Book of Birds" are still unrivalled as specimens of exquisite truthfulness and finish. Bewick was born at Cherryburn, in Northumberland, in 1753, and as he had shown some taste in drawing, was apprenticed to a copper-plate engraver at Newcastle-on-Tyne. His master, Mr. Beilby, engraved door-plates, clock-faces, and occasionally copper-plates for illustrating books, and with his brother, Thomas Beilby, also taught drawing. They never gave Bewick a lesson, however; for they undertook such a variety of work that the lad was always employed, and had no time to study. Etching sword-blades, making bookbinders' stamps and dies, engraving stones, rings, jewellery, and silver plate, and, in fact, all the business that could be supposed to belong to their trade, and never refusing an order, the workshop of the Beilbys was always full. It happened, however, that this brought about the very event which afterwards made Bewick famous; for, among other orders, there occasionally came some from

printers, asking the Beilbys to execute some woodcuts for their books and handbills. Mr. Beilby was such a bad hand at wood-engraving, and disliked it so much, that he soon left that branch of the work his apprentice, who then began to design and make drawings on the wood—an occupation in which he delighted—and to engrave the designs that he had made. One of these was a picture of St. George and the Dragon, for the top of a bill; and it was so well executed and attracted so much attention, that more orders were sent than he could easily undertake, and his whole time was devoted to designing and cutting wood blocks. Some pictures which he engraved for Gay's Fables were so good that his master sent a few impressions of them to the Society for the Encouragement of Arts, who sent to ask him whether he would have a gold medal or seven guineas in money. He chose the money, and said that he never felt greater pleasure in his life than in presenting it to his mother. When he was out of his apprenticeship Bewick found himself constantly employed; and some of his works will remain as exquisite specimens of the art as long as wood-engraving is practised. A series of his designs may be seen at the South Kensington Museum, along with many other pictures illustrative of the progress of drawing and engraving on wood.

Since the death of Bewick, in 1828, the establishment of so many illustrated magazines and newspapers, the immense increase in the number of picture books for children, and the substitution of woodcuts for copper and steel plate engravings, have all made the trade of the wood engraver of greater importance; and most of our great artists have devoted their attention to drawing pictures on wood blocks, that they might be cut afterwards by those who make engraving only their particular business. In this respect the modern differs very materially from the ancient practice. The old masters not only made the design of the picture on the wood but very often engraved it afterwards. This is not very often the case in our own day, and though to be a skilful wood engraver it is necessary also to be a tolerably good artist, the two professions are in most instances quite distinct.

This, then, is a brief account of the history of wood engraving, and it is necessary now to say something of the manner in which the operation itself is performed.

The first thing to be done is to select the "block" or the piece of wood to be engraved, and this is now always box-wood which is fine in texture, and presents a hard surface on which sharp lines may easily be cut. To obtain these blocks of box-wood the tree is cut across in slices, which are afterwards made smooth with a plane and sawn into pieces of

the required size. These blocks are all made an inch in thickness, in order that they may be of the same depth as the printing types with which they are used, and few, if any of them, are more than eight inches square, so that if a large picture is required several blocks have to be joined together. They are usually joined by brass bolts or screws which pass through holes bored in the sides of the blocks, and are tightened by a nut that goes on to the end of the screw, a cavity being cut in the back of the wood at the point to which the end of the screw reaches, so that the nut may be placed on and screwed up tight. By these means, when the drawing is made on a large block composed of several small ones, it can be unscrewed, and a section, consisting of one of the small blocks, may be given to each engraver, so that the work is completed by several hands all engaged at one time. When all these sections are engraved the blocks are screwed together again and the entire engraving is finished. Large quantities of wood blocks are of course used every week, and the prices vary from eighteen pence to two or three shillings. The best are those that are made from fine smooth dry wood without knots or flaws, neither very dark nor very light in colour, and without any considerable variation of colour in the same piece.

Before the drawing is made the face of the block generally requires to be roughened, since a black-lead pencil with which the design is mostly made would not mark firmly and distinctly on such a smooth and polished surface. It is the practice also to whiten the surface with finely-powdered bath-brick and flake white, afterwards removing every particle of grit that may be left there by this process. To draw on the block when it is thus prepared requires some experience, as the lines should be unmistakably firm and clear, since every one of them will have to stand out in relief when it is engraved. A good drawing on the wood is, in fact, a clear and admirably finished pencil drawing, and although many artists make their designs or put in their shadows with Indian ink, and pick out the lights with flake or French white ; this can only be done when the engraver is himself an artist, and knows how to put in the parts that are indicated and so give the intended effect to the design, by rendering the shades in the various lines made by the proper tools used in his business.

It may be imagined, then, that the art of wood engraving is not to be learnt without considerable study and a great degree of taste, for it depends on the workman whether the picture shall present the due proportions of light and shade or shall have a blurred and dirty appearance. Even to cut the parallel lines so that a sky shall be dark or light in tint according to the thickness of the lines and the spaces cut between them,

is not easy at first, though it is the very earliest lesson given to the learner, to teach him how to use the *tinting or shade tools*. When this is acquired he learns to cut bent or waving lines, and at last is put to cross-hatching or cutting lines that intersect each other at various angles, and represents different degrees of shade.

When at work, the engraver sits at a rather high table or bench, which should be in a strong steady northern light, for it is very desirable that he should see clearly what he is about; and when the work is very fine he frequently uses a strong magnifying glass while he is cutting that portion of the block that requires the most delicate handling. When working at night it is customary for several engravers to sit round a table where shaded lamps throw their light upon glass globes filled with water. These globes, standing directly in front of them, concentrate the light upon their work and also prevent that flicker which is so confusing to the eye.

Before commencing to engrave the block, the drawing, which is liable to be rubbed or defaced, is generally covered with a piece of fine white writing-paper folded over the edges. A small piece of this paper is torn off from the part of the block where the work is to commence; and as the engraving proceeds, fresh strips are torn off until the whole design is cut on the wood. In order to secure a firm foundation for the block, and yet to make it easy to move it rapidly with the left hand while the right hand uses the graver, it is placed on a *pad* or cushion of leather filled with sand. The tool is held in a peculiar way, and guided by the thumb. When it is remembered what steadiness of hand is required, it is remarkable how soon rapidity of execution may be acquired if the learner is taught at first how to manage his graver according to the sort of line he desires to produce. It is of course necessary to make a cut of uniform depth, and in such a way that the portion of the wood cut away leaves the block in thread-like parings.

The gravers are tools of about four inches long, with an angular steel blade very sharp at the point, with a small wooden handle, one side of which is flat to admit of its lying on the bench. The gravers are of various degrees of fineness, the finest being used for the more delicate, and the broader points for the strong and bold lines. Some of the gravers are slightly bent, so that they may be used more effectually for scooping out the wood in parts where it is required to hollow it. The tint-tools already mentioned are principally used for fine parallel lines, and are generally thinner than the graver. The flat tools are used for clearing away the wood at the edges of the block and for trimming the work.

One of the most delicate operations in wood-engraving is what is called "lowering." To explain this, it is necessary to remark that all

Flat Tools. Scoopers. Shade Tools. Gravers. Burnisher.

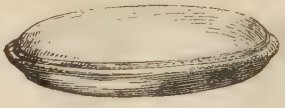
the lines in an ordinary woodcut come out with equal blackness and clearness unless some method be adopted for reducing the pressure in those parts where it is desired to obtain a paler or more subdued tint. This is sometimes secured by the printers, who, by long experience, can lay small pieces or patches of paper below the sheet on which the engraving is to appear, in such a way as to bring up the darker and firmer lines and leave the lighter portions less distinct. This operation, however, is difficult and uncertain; so that, in the finer engravings, the result is attained by lowering those portions that are to be printed lightly by gently scraping them first with the "scooper," according to the various degrees of shade required—an operation of great nicety, and requiring considerable experience.

When an error or a miscut is made in the process of engraving a wood block it is not easily remedied, though it is sometimes possible to drill out the imperfect portion, fill up the space with an accurately-fitting plug of wood, neatly glued to prevent it from moving, and then to draw and cut that part over again.

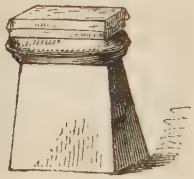
When the engraving is finished, it is necessary to take a "proof" of it—that is to say, to print a first impression in order to see that it is

perfectly correct. For this purpose some of the best printers' ink is placed on a smooth slab of stone, and some of this ink is taken upon a

Block covered ready for engraving.



Sandbag, or Cushion.



Block placed on Sandbag.

Eyeglass.

"dabber"—a kind of soft cushion composed of white leather, or fine silk stuffed with wool. The dabber is beaten lightly on the stone till the ink is spread equally over its surface, and then the block is struck gently with it in such a way that a thin layer of ink remains on the lines, while none of it flows down into the interstices. A piece of fine India paper has been prepared, and on this the workman breathes gently before he places it carefully on the block. On the top of it he lays a piece of card, and, taking care not to move the India paper, rubs the whole over with a burnisher with a firm and equal pressure, which is sufficient to obtain a clear impression of the engraving.

Far Away in the Frozen Seas;

OR,

A STORY OF A WHALING EXPEDITION.

CHAPTER III.

AWAY TO THE NORTH (*continued*).

NOTHING could have been more favourable than the beginning of the voyage, but a few days later they encountered a storm which considerably tested the metal of the crew. However, the result was most satisfactory, and completely satisfied the captain as to the skill and experience of every man on board.

During the whole time the storm lasted, Lieutenant Lowell, a young man about twenty years of age, stood firm and fearless by his side; the steersmen, Wilson and Godfrey, never left their post, and each one of the crew proved equally true to his trust. Even Dr. Hayes, the surgeon, whose services Captain Becker had thought it right to secure for the sake of his men, was not idle, but gave all the help he could, and Robert, we may be quite sure, was not a whit behind. After the storm, which lasted three whole days, was over, and the wind had again become favourable, a thorough examination was made of the vessel. It turned out that she had not sustained even the most trifling damage, neither in the hull nor cordage nor sails—a most fortunate circumstance, which was mainly owing to the cool, cautious, undaunted courage of the officers, and the brave, persevering efforts of the crew.

"They are capital fellows, so brave and willing," exclaimed the captain, with an expression of satisfaction on his face, to Robert and Lieutenant Lowell, as he was about to go into his cabin and take a

little refreshing sleep, after forty-eight hours' incessant watching. "Positively they are! It is a pleasure to have to do with them, and I can trust them implicitly. With such hands on board, one need not be much afraid to dare the terrors of the Polar Seas."

The course of the vessel was naturally determined by the latest intelligence Captain Becker had received about the *Eleanor*. The plan proposed for the discovery of the missing ship, or at least of some of her crew, was simple enough. It was settled they should push as far North as possible, while the mild weather lasted, and seek in all directions for some clue to the track, among the natives of Greenland, the Esquimaux; and afterwards that if necessary, they should spend the whole winter on their inhospitable shores. For this everything was fully prepared. They were to choose a suitable place for an encampment, and make huts for the sailors, after the fashion of the Esquimaux, and then to go out in parties, and scour the country in different directions. It was Captain Becker's opinion that this would be the easiest and surest way of discovering the lost, should they be still living, and he thought the intercourse with the natives would be especially helpful. A ship like the *Eleanor* must have been noticed if she had taken shelter in any bay on the coast, and it was to be hoped that the Esquimaux, those Nomads of the North, who often extend their hunting expeditions over immense distances, would be able to give some information about her.

After three weeks' sailing, the *Hope* began to near the coast of Greenland, and Captain Becker expected in a few days to reach the harbour of Fiskernäs, the chief Danish station for receiving the cod-fish and preparing it for the market, when a singular occurrence induced him to alter his course entirely.

Robert was standing one morning on the topmast, gazing at the wide outspread sea and far horizon, but there was nothing unusual to be seen. Several mighty icebergs were floating about, but not the gleam of a sail could he descry, or the faintest outline of land. Weary of his fruitless look-out he was about to lower the glass and get down on deck, when he suddenly observed a small dark object on the surface of the water. At first he quite believed it was a whale, but as he looked closer he became doubtful, for it was perfectly motionless and always in the same spot. If it was really a whale it must be dead, Robert said to himself, but as he still kept his eye fixed on the strange looking thing, he fancied a sort of flag began to wave over it. He readjusted his glass, and at the same minute a bright ray of sunshine broke out of the clouds, and he saw clearly that whatever the black speck was it had

life and motion. The boy's curiosity was roused to a pitch and he called out to Captain Becker who was pacing the quarter deck below with Lieutenant Lovell:

"Do look, captain," he said, "some strange concern is moving about there to the North-west, that I can't make head or tail of; is it a fish, or a bird, a block of wood, or a little boat? I can't see exactly which."

Captain Becker looked in the given direction, but could discern nothing with his naked eye, so he sent Lieutenant Lowell for the most powerful telescope on board. It was soon brought and he had hardly given one glance, through it when he exclaimed in amazement:

"Why it's a kyack! And as sure as I live there is some human being in it, making signals of distress!"

"A kyack! what is that, captain?" asked Robert, who had meanwhile made his way down on deck.

"A kyack is a light boat used by the Esquimaux for fishing, or in making long journeys on the sea. It consists of nothing but a framework in the shape of a boat, over which sealskins are tightly stretched. Everywhere it is air-tight and water-tight except in the middle, where there is a round hole for the oarsman to sit in. It is so light that it skims over the water with uncommon swiftness, and I cannot at all understand why that one lies so motionless there like a log of wood."

"Perhaps the poor fellow in it has met with some disaster," said Robert, compassionately. "He is still waving his signal, though heaven knows what his flag is made of. But we must go to his help, captain."

"Ay, indeed, we must," said the captain, "though it is quite out of our course. It is his seal-skin jacket that the poor fellow is waving so despairingly. Shift the helm! Yes, yes, we cannot leave him to his fate. He must either have broken his oar, or lost it, or he would be flying to us already like a sea-gull."

A few minutes later and the *Hope* had veered round, and was bearing down direct on the strange craft. The captain still kept his eye on the telescope, and presently exclaimed:

"Yes, it is just as I thought, the poor fellow has lost his oar, and that is how he is so helpless. He will thank his God that we noticed him, and came to his help. Ah! now, he sees us coming, for he has left off waving his signal. Well, my poor fellow, you may be glad your fate is more fortunate than many of your brethren, who have been drifted along at the mercy of the winds and the waves, and tossed about like corks. Too often the poor creatures in those frail barks find a watery grave."

"I'm only amazed that they can ever venture out in them so far into the open sea," said Robert.

"Well, certainly, they are foolhardy enough to risk it," replied the captain. "But when once an Esquimaux is seated in the hole of his boat, and has drawn up the edge and fastened it tight round his waist —when he has on his dress of sealskin, and is waterproof to his very throat, and he has the oar in his hand, with the blade at both ends, he feels as safe as the sea-gull that skims on the wing along the waves. And yet to what dangers the poor fellows are constantly exposed! Two perils, especially, are always lying in wait for their destruction—drift-wood and floating ice. Any collision with these, which is often quite unavoidable, is sufficient to tear the thin covering of the kyack, and then there is no escape for the poor oarsman, for he is so firmly wedged in his miserable bark that it becomes his coffin. There was a sad occurrence of that sort when I was last here, four years ago. Three Esquimaux went out together to fish. All their kyacks were in good trim and quite sea-worthy, and they hoped to return from their expedition in a few days. But week after week passed and brought no tidings of them. At last, one day they came back, but quite dead! Only two of the kyacks were there, driven on the coast by the wind; but in each of them sat the corpse of an Esquimaux, either frozen or starved to death. The two little boats were firmly fastened together, and between them knelt the third Esquimaux, quite stiff and cold. It was supposed that he had lost his kyack through coming in contact with the drifting ice, and his companions had tried to save him by putting him between themselves in that way. But they had apparently got jammed in among floating ice and could find no way out, and it was only too evident all three had perished with hunger and cold. Their mournful fate excited universal sympathy, and they were buried with the greatest solemnity.

"However, occasionally some of them fare much better," continued the captain; "and it has sometimes happened that an Esquimaux who had left his hut with his kyack and sledge, and never returned, had been lamented as dead; when, long years after, some of the whalers would bring his friends the intelligence that he was still alive, and had managed to reach the unknown West after unheard-of toils and difficulties. Ay, the poor wretches come through a great deal! Four or five years ago, two of them started off to hunt for seals. As far as the eye could reach, there was one unbroken plain of ice, from the coast of Greenland downwards; but in the middle of the night one of them woke up out of a heavy sleep, and found that the wind had changed and was

blowing towards the east. It felt quite mild already, and they lost not an instant in fastening the dogs to the sledge and endeavouring to retrace their way to the firm land. But it was too late! A broad gulf of water lay now between them and the shore. The day passed in hopeless, frantic despair. A storm began to rise, and a land wind blew to the south-east, which speedily brought a thick mist, and the land was completely out of sight. The two Esquimaux once more attached the dogs to the sledges, and turned westwards. A hundred and thirty miles of ice lay before them; and on the third day the dogs could go no further, and one of the Esquimaux sank beneath his miseries and soon lay dead. His comrade could not prevent the dogs from devouring his body, for they were so ravenous that they would likely enough have torn himself in pieces if he had attempted it. Strengthened by their horrible meal, the Esquimaux pursued his journey, and at length reached, still alive, the shore of North America, near Trader's Bay. It was not till many years after, and in a most circuitous manner, that the news of his safety came to the settlement in Greenland, and meantime the man had married and adopted a new home and country. He did not go back; but the recital of all he had undergone was said to be most thrilling."

A loud shout from the sea interrupted the captain, and looking over the side of the ship he saw they were quite close to the solitary kyack. A young Esquimaux, apparently about nineteen or twenty years of age, sat in it, and stretched out his arms imploringly. He looked pale and miserable, and the large tears were running down his cheeks.

"Cheer up, my boy," said the captain; "all your troubles will be over in a few minutes. Come, my men, give him a helping hand, and bring him and his kyack on board. Give him first into the doctor's charge, and when he has recovered a little fetch him into my cabin, and we'll try and find out how he came into such a pitiful plight as this."

The order was soon obeyed, and the Esquimaux and his kyack were safe on board; but the poor fellow was almost unconscious. Robert took special charge of him, and aided the doctor in efforts for his recovery. The remedies proved successful, and in a short time he was able to take some nourishment, for it was evident he was in a starving condition. Afterwards he fell into a long sound sleep, which so thoroughly restored him that the next morning he was able to get up and go with Robert to the captain, who received him with his customary kindness, and said—

"Well, my son, it is very clear, from the deplorable state you were

in when we fished you up, that you have not been having very good luck. What is your name?"

"Hans Christian, from Fiskernäs, on the coast of Greenland," replied the lad.

"But you are a long way from home, then. How's that, Hans?" asked the captain.

"I went out to hunt seals, sir," he said. "I am a hunter, and my people say I am the best hand among them. I had my rifle and shot with me, and provisions enough for three or four days. I rowed a good way out into the sea to an island where the seals are generally found basking in the sun.

"While I was lying there I suppose I had fallen asleep for a little, it was in the middle of the night, when a violent jolt woke me up and whirled me and my kyack round and round till I believed my end was come. But fortunately the boat righted itself again after a bit, and though I was dripping with water, my life at least was safe. The night was so dark, that I could not see what had caused all the commotion, but I almost think I must have come against a whale or large seal, and that it had turned me right over head and heels. At the time I hardly gave it a thought, for I was too uneasy about other things. In the upsetting of the kyack my gun and my oar had both disappeared. Of course the gun I had no hope of recovering, for it must have gone into the depths of the sea, but the oar must be floating somewhere near, and my life depended on finding it, for what could I do without an oar at such a distance from land? I looked about for it with great anxiety, but either the night was too dark or it had been whirled away too far, for I could nowhere discover it. I went up and down in all directions, paddling with my hands. But it was useless work, and perhaps did more harm than good, as I could not see and was just as likely to get farther away from the oar as nearer to it. At last I thought it was best to leave off searching and wait till daylight, for if once the sun rose it would very likely reveal to me the object I so desired, and if I only set eyes on it, I should soon get possession of it, for my kyack is very light and I could manage to row a long way with my hands. I waited impatiently for the morning and my only comfort was that at any rate my canoe was not the least injured, for I had examined it carefully all over.

"The night seemed terribly long though in reality it was only a few hours till the sun rose. With the first streak of dawn I renewed my search; but still in vain, and even when the day fully broke I could nowhere catch sight of the missing oar. It had completely disappeared

and God only knows whither it had been drifted. A deadly fear came over me, for alas, Sir, what hope was there for me? I saw no prospect of deliverance, and starvation stared me in the face. True my stock of food was not quite exhausted, but how long would it last? And when it was all eaten what could I do? I wept outright, Sir, and bemoaned my wretched fate. Then I got calmer; and clung to the hope that perhaps some countryman of my own might chance to come in his kyack and discover me, or some whaling vessel might pass that way. Meanwhile, my kyack was drifting about quite at the mercy of the winds and waves, for I was powerless before them and it would have been folly in the extreme to attempt to paddle with my hands all the way back to my home. Three days and three nights passed, but no deliverance came. All my provisions were consumed though I had tried to make them last as long as possible, and hunger began to seize on me. Once again I watched the sun sink beneath the waves and rise again, but I had become so weak that I could scarcely raise my head to look about, and I had all but resigned myself to my fate to perish far from home on this watery waste under the open sky, when just in the extremity of despair I saw the gleam of your sail on the horizon and noticed it came nearer and nearer me though not quite in my direction. How I shouted, Sir, with all my remaining strength, and how I wept and prayed! At last in my desperation I began to wave my jacket and waited in mortal agony to see if you would notice it and come to my help. I could not describe how I felt, Sir, nor find words to tell you the joy when at last I saw the ship had turned and began to make towards me.

"All that followed, Sir, you know better than I do, for after I felt myself safe on the deck of your ship I remember nothing more. I thank you, Sir, from the bottom of my soul for saving a poor fellow like me. I owe my life to you and it belongs to you henceforth, even to my last drop of blood."

The tears stood in the poor fellow's eyes, and it was evident every word he uttered came from his heart. The captain clapped him kindly on the shoulder, and said, pointing to Robert:

"It is that young gentleman you have to thank, for if he had not spied you out from the mast-head we should certainly have sailed right past without even noticing you and your little kyack. You owe your deliverance entirely to him."

Hans looked long and lovingly at Robert's smiling face, and at length said as he kissed the hem of his jacket—

"I am but a poor fellow and quite alone in the world, without father

or mother, or brothers, or sisters, but I have a true and warm heart. Let me be your servant and I'll serve you faithfully. I don't understand much except shooting and harpooning, and laying nets and snares, and I can both fight a bear and out-reach the cunning walrus. Let me stay with you as your huntsman, or make me anything else you please."

Robert looked inquiringly at the captain, and on receiving an approving nod, replied—

"Well, Hans, I'll accept your services as long as we remain in this region, and if you serve me faithfully you shall not be a loser. I will provide your outfit. You shall have a good rifle, a knife, a hanger, and every thing a hunter needs. Now go and tell them to give you some breakfast, and afterwards we'll have another talk."

The young Esquimaux left the cabin and Robert turned round smiling to the captain and asked what he thought of the poor lad.

"I think he'll prove a great acquisition," replied the captain. "If he is true and honest as he looks he may possibly be of substantial service to us. A good hunter in this clime is always welcome. Besides, he will gain for us the confidence of his people, which is a very important matter if we are obliged to spend all next winter here, and last of all he can get any information about your father better than we can, that is to say if he is disposed to do it, and I can hardly doubt he is, for he has such a trustworthy honest face. Altogether, I really think, Robert, your mast-head discovery will turn out a most favourable thing for our undertaking."

"So much the better if it does," said Robert with great satisfaction. "Then it is settled that I take Hans into my service as huntsman, and in a little time I hope some opportunity may occur for testing his skill."

A few days subsequently the *Hope* entered the harbour of Fiskernäs without any further delay or adventure. The appearance of Hans Christian created the utmost excitement, as every one had given him up for lost. Captain Becker made searching inquiry about his antecedents and received on all hands satisfactory replies. He bore an excellent character, and had besides the reputation of being the most skilful and fearless hunter in the whole district. Robert was now doubly pleased to have engaged his services, and went himself to the armour-room of the *Hope* and selected for him the best gun he could find. Hans' first exploit was to shoot a gull on the wing at two hundred paces distant, and this fully satisfied his young master that he would be equal to any future work.

About Captain Griffin, not a scrap of information could be obtained, though they made the most minute inquiries. So they were obliged to

determine still to be guided by the latest tidings they had received in New York, and continue their journey further north.

The *Hope* did not lie long in Fiskernäs, but weighed anchor once more, and steered in the direction of Melville Bay in pursuance of the plan—to search all along the Greenland coast while the short summer lasted, and they could sail with safety in the Polar seas. Captain Becker still clung fast to the hope that in some part or other they would hear of his old friend Captain Griffin: so onwards they pressed in God's name, and trusting to His protection in their dangerous and fatiguing voyage.

(*To be continued.*)

How to Make a Model Steamboat.

IN the following article I shall endeavour to explain to my readers how they may make a cheap model paddle steamboat.

The first part to be made is the hull. For this you must obtain a piece of either pine or ash (free from knots and other imperfections), a little over twenty-two inches long, and about five inches thick; you must now carefully shape your hull, as shown in fig. 2, having done which to your satisfaction, you must draw a straight line down the centre of your deck, and measure five inches from the stem, and the same number of inches from the stern; the space between this you must carefully hollow out, in order to make room for the machinery; the part to be removed is shown between the two dotted lines, A A and B B, in fig. 2.

Fig. 1 will give you a general view and idea of our steamer: A is the paddle-box, B the boiler, C C the two funnels, D the cylinders, &c., E the waste steam-pipe, F the rudder, H the paddle-wheel axle, I is a tap which can be worked on deck, and by turning which the engines can be stopped or set in motion at pleasure, N is a pipe leading from the boiler to the cylinders, T is the safety-valve, and L the lamp.

The boiler is the only part you will not be able to make yourself; any tinman or coppersmith would, however, make it for a trifle; it can either be of block-tin or brass: if made of block-tin it would be somewhat cheaper, but brass looks much better, and besides is more durable, and therefore to be preferred; the boiler should be six inches and a half long, and three inches in diameter, and it should be hard soldered.

We will now proceed to make the cylinders and parts connected with

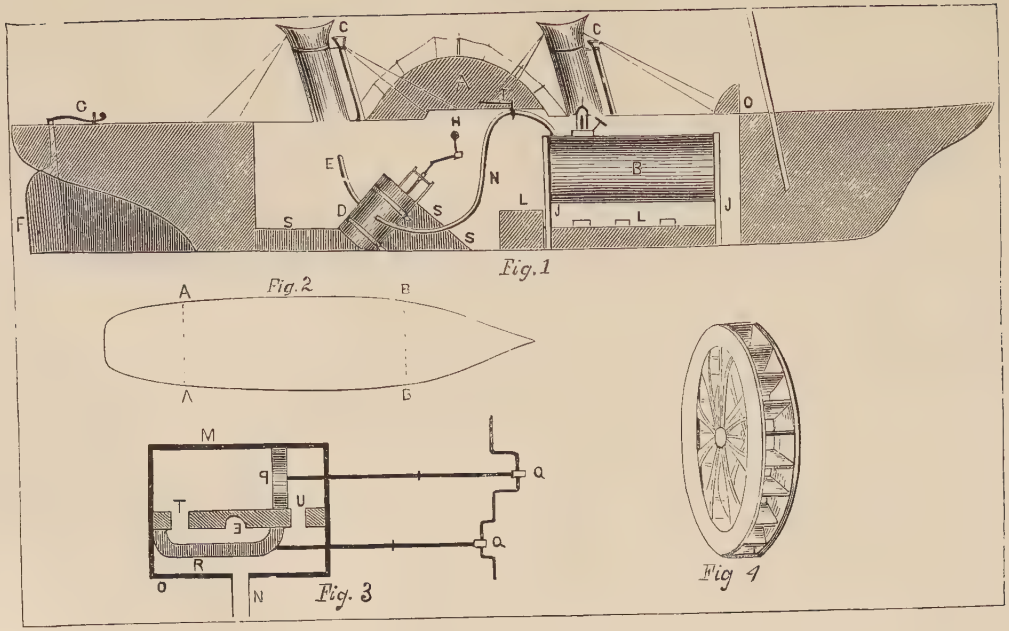


Fig. 1

Fig. 2

Fig. 3

Fig 4

HOW TO MAKE A MODEL STEAM-BOAT.

the same; and here some little patience and care will be required in order to make the parts work evenly and accurately. Before we make the cylinders, &c., I had, perhaps, better explain how these parts work; to do this I must refer you to fig. 3: here, N is the pipe leading from the boiler, H the paddle-wheel axle, M the cylinder, O the steam-box, P the piston, R the side-valve, E the waste steam-pipe, and T, U, two openings leading from the steam-box to the cylinder. And now to explain how these work. The steam enters the steam-box O by the pipe N; as the passage T is closed by the side-valve R, it is forced to go through the passage U, and thus drives the piston P down, whilst the waste steam, which previously drove the piston P up, escapes through the passage T, and thence, by the waste steam-pipe, at E into the air. When, however, the piston P is driven down, the order of things is reversed; then, as will be directly seen by the arrangement of the two cranks, Q, Q, the side-valve R is drawn up, and the passage T is left open, while that of U is closed, and thus the piston P is driven up again.

Having, as I trust, fully and clearly explained the working of the cylinder and steam-box, we will commence to make the same. The cylinder should be two inches and a quarter long, and one inch and a quarter in diameter; an old telescope-tube, of about those dimensions, would do very well. To make the piston, we must place the cylinder on a flat stone, and run some melted lead to the bottom to about the thickness of a penny; whilst in a molten state we must place a piece of strong, straight wire perpendicularly in it, so that when the lead cools it may be firmly fixed to the same. The steam-box and side-valve next require our attention: the steam-box should be two inches and a quarter long, and about three quarters of an inch in diameter; any piece of pipe or tube, provided it is straight and even throughout, will do; having obtained which, we must proceed to make the side-valve R: to do this we must place the steam-box on a piece of flat stone, and pour some melted lead into the bottom, in precisely the same manner as already described in making the piston,—only, instead of being the thickness of a penny, the lead should be run in till the steam-box is about three quarters full; then, in the manner already described, we must place a piece of straight wire perpendicularly in the centre of the lead, so as to be fixed firmly to the same when it cools. By referring to fig. 3 the general shape of the side-valve will be seen, and when, of course, we take it out of the steam-box it will be a perfect cylinder; we must, however, carefully file it to the required shape, further particulars of which will be given as we proceed.

We have now the cylinder, piston, and piston-rod, made; but, as yet, the cylinder is open at both ends: these must be secured by means of two pieces of brass filed to the required size, and afterwards soldered securely on; a small hole must, however, first be carefully made in the top one, for the piston-rod to pass through; and the ends of the steam-box must also be secured in a like manner.

The two passages, T and U, must now be made in the side of our cylinder, and two other similar passages must be bored through our steam-box, in order to meet them. The intervening space between the steam-box and cylinder (*see* fig. 3) must be filled with solder; the hole E, for the waste steam-pipe, can easily be bored after the solder is set; and our cylinder, steam-box, &c., are complete.

We will now secure our boiler, cylinder, &c., in their respective positions; before we do which, however, we must line the inside of the hull with tin, to prevent the wood from being scorched or burnt by the heat of the lamp. The boiler is supported by two pieces of stout wire, ends of which are securely fixed into the bottom of the boat. The cylinders, &c., must be fixed as shown in fig. 1; they must be kept in their proper position by means of two pieces of wood, S S, which should be firmly screwed to the bottom of the boat; a slight groove should be cut in the wood, in order to receive the cylinder, which should be further secured by means of two thin brass bands being placed round it, and afterwards well screwed down on either side of the same.

The boiler, cylinders, &c., being duly fixed, the paddle-wheels next require our attention: for these four wheels, or discs, are necessary, to make which we must procure a sheet of thin brass, and, with a compass, describe four circles on it; these should be four inches and three quarters in diameter; the shape of our wheels will be best seen in fig. 4, which represents one of the paddles complete—that is, two of our discs joined together with the paddles. We shall require ten floats to each paddle-wheel, which must be cut out of some hard wood, and should be as thin as possible, and about half an inch long. Having completed the paddle-wheels, we have now their axle to make; this consists simply of a piece of straight wire with two cranks bent in it (*see* fig. 3), for the piston and valve-rod to work.

We must now join the two paddle-wheels to the ends of the axle; the piston and side-valve rod must also be joined to their respective cranks: this is easily done by bending the ends of the piston and valve-rod round the axle, taking care to bend them sufficiently loose that the parts may work freely. We have now a safety-valve to make: for this we must procure a piece of thin pipe, a little over an eighth of an inch

in diameter; this we must solder on the top of our boiler, in the position shown at T, fig. 1; enclosed in this pipe is a piece of watch or spiral spring, which keeps down a small piece of metal, which metal is forced up when the steam is too strong in the boiler, thus allowing it to escape.

The boiler must now be put into communication with the cylinder, by means of a piece of thin pipe, as shown in fig. 1; we must also make and fix a small rudder as shown, after which we have only the deck covering, two funnels, and paddle-boxes, to make to complete our boat.

The deck should be made of tin; two holes must be bored in it for the two funnels, and another at O (*see* fig. 1), in order to admit a current of fresh air, without which our lamps would go out: the use of the chimneys is not merely ornamental, they serve to carry away the vitiated air and waste steam.

We can, if we choose to make our boat look more important, fix and rig a light mast in front of the same at O; and also a glass covering might be placed over the cylinders, &c.

The weight of the boiler, machinery, &c., will generally be found sufficient ballast; should, however, our boat appear liable to capsize, we shall have to nail a thin strip of lead along the bottom, which will also serve for a keel—and our boat is finished.

Stephen Scudamore the Younger;

OR,

THE FIFTEEN-YEAR-OLDS.

A STORY OF BOYS' ADVENTURES AT HOME, ON BOARD A PASSENGER SHIP AND ON THE AUSTRALIAN GOLD-FIELDS.

By ARTHUR LOCKER.

PART III.—CHAPTER I.

Arrival in Liverpool.—The Yellow Handkerchief.—Mr. Toohey the Porter.—Biddy the Maid.—Mrs. M'Gaffney's Select Boarding-house.—My Fellow Clerk.—A Visit to the Saragossa Dock on a Wintry Morning.—Nature of Mr. M'Gaffney's Business.—A Letter to my Mother.—My Discontent.—The Australian Gold Discoveries.

THE train plunged with a loud shriek into the tunnel at Edge Hill, and a few minutes later emerged into daylight at the Lime-street Station, setting me down in the very middle of Liverpool. Mr. M'Gaffney had arranged with my father to meet me at the station, and had agreed to wave a yellow handkerchief as a signal of recognition. I looked anxiously out of the carriage-window, and presently seeing a hand and arm in the act of waving a yellow handkerchief in the midst of the excited crowd which thronged the station, I jumped out, and made my way towards it.

"Please, sir, are you Mr. M'Gaffney?" I asked, doubtfully, addressing a short, squat personage of fifty, who wore a greasy moleskin suit, and had a very grimy face.

"No, sir, I'm not," answered the man, with a merry laugh; "but I'm his deputy. The master was too busy to come down to-night. You'll not be for taking a kyar, I suppose?"

"A kyar? What is that?"

"A coach—a cab they call it in London. Walking will be better for your health."

"Then I'll certainly walk."

"That's right, sir; and I'll carry your boxes on my truck."

My first impressions of Liverpool were by no means prepossessing. The streets were thronged with people; but there was scarcely a decently-dressed person among them. The women, with their rough, uncombed heads, naked feet, and slatternly shawls, looked like white savages; while the children, who were about the streets in hundreds and thousands, though the shops were beginning to shut for the night, seemed the dirtiest, raggedest little creatures I had ever seen. Both they and their parents lived, for the most part, in dark, damp, dismal, cellars below the level of the streets.

"Is all Liverpool like this?" I asked, in a tone of the deepest melancholy.

"Like this? No; Heaven presarve us if it was. No, no; there's some dacent places in Liverpool, though it can't hold a candle to the city of Dublin for that matter."

"Are we near Mr. M'Gaffney's yet?"

"It's quite convanient, sir," replied my guide; and indeed a few minutes later we entered a quiet street of a superior description to those which we had lately traversed, and presently stopped before a private house, on the door of which was a brass plate bearing the following inscription—

"Mrs. M'Gaffney's Select Boarding-House."

As he knocked at the door, my attendant, whose name was Toohey, touched his cap, and whispered that he would be glad of a trifle for carrying my things.

"How much ought I to give you?" asked I, blushing, and fumbling in my pocket.

Now an Englishman would have answered, "What you please, sir. I leaves that to you;" and then most likely would have gone away grumbling unless I had considerably overpaid him. But my Dublin friend was far more explanatory.

"Well, sir," he replied, "there ye place me in a difficulty. If ye wanted to plaze yourself, maybe you'd offer me sixpence. But if ye wanted to plaze me, you'd offer me eighteenpence. Suppose we split the difference, and say a shilling?"

I thought this proposition a fair one, and placed the required coin in his hand.

The door was opened by a good-humoured, but rather dirty, servant-girl.

"I've fetched the young gintleman, Miss Bridget," says Mr. Toohey, respectfully.

"And a nice-looking young gintleman he is," observed Miss Bridget, making me blush, as she shaded the candle with her hand and carefully examined my face. "I hope you've enjoyed your journey, sir." She then turned sharply round, and screamed upstairs, "Mistress! mistress! you're wanted."

"How can I come now, Biddy," presently answered a voice from the first-floor landing, "when I'm after giving the boarders their suppers?"

"It's the young gintleman from London," replied Biddy, "and I didn't know whether you'd care to have him upstairs?"

"Oh! it's young Mr. Scudamore, is it?" said the voice from above, in an altered tone. "Please to give him my compliments, and say I'll be down with him in a minute."

There was no need for Biddy to deliver this civil message about the compliments, for I could hear it as well as she could; so we just stood and looked at each other till the rustling of a silk dress on the stairs proclaimed the approach of Mrs. M'Gaffney. She was a tall, stout, rosy-faced lady of forty, or thereabouts, who shook hands with me very kindly, asked very particularly after the health of my papa and mamma and sister, as if she had known them all her life, and then invited me, as soon as I had washed my hands and face in Mr. M'Gaffney's dressing-room, to come and sit in her private parlour.

"Biddy, lay the cloth, there's a good girl," said the mistress of the house, "and bring Mr. Scudamore anything that those greedy souls upstairs have forgotten to eat. There'll be a bit of rabbit-pie, I'm sure, and you must draw him a glass of ale. This is my snuggery, Mr. Scudamore; my sole place of retreat, barring my bed-chamber, from the noisy world of a boarding-house. I'd have introduced ye upstairs, but I could see you were tired, and there was a little more noise than ordinary because Captain Whelan was keeping his birthday."

The good lady rattled away in this style all the time I was eating; but I had gained a very good appetite in the railway-carriage, and I managed to make an excellent supper on the remnants of the repast which had been left by the company upstairs. All the rabbit's bones had been picked clean; but there was a bit of pie-crust, there was half

a mutton chop, and the rind of a cheese: so, with plenty of bread-and-butter, though the butter was rather rancid, I managed to do extremely well.

I have already observed that my father had brought us up in a Spartan fashion, feeding us on very plain food, and teaching us to pay little attention to our eating and drinking. Since those days I have often had to eat so many worse suppers than Mrs. M'Gaffney's, that I have felt thankful for the wholesome discipline of my childhood.

I had scarcely finished my supper, when I heard a latch-key rattling in the street-door, and presently a sharp, quick step sounded in the passage.

"It's Mr. M'Gaffney," observed his wife, turning with a smile towards me. "Pierce, darling," she said, putting her head into the passage, "Mr. Scudamore has arrived from London."

"And very proud I am to make Mr. Scudamore's acquaintance," said a neatly-dressed, dapper little man, with a shining bald head and large black whiskers, as he advanced and shook me warmly by the hand. "Where's Mr. Prawle, Katie?"

"Gone to bed. He said he was dog-tired, trapesing about the streets all day."

"He must be up by six, and down at the Saragossa Dock. The *Jabez P. Skinner* is going to haul into the stream at daylight, and these tickets must be handed over to the passengers. Are you a good getter up, Mr. Scudamore?"

"I hope so, sir."

"That's right. Lie-a-beds don't prosper in our business, do they, Katie? Perhaps you'd like to go down to the dock with Mr. Prawle in the morning? It'll give you a practical insight into our business."

"I should like it very much, sir, if Mr. Prawle doesn't——"

"Oh, ye needn't be afraid of Mr. Prawle," exclaimed Mrs. M'Gaffney, with a loud laugh. "He's only a young gentleman like yourself —maybe a year or two older. Biddy shall call you both at six; indeed, she can scarcely help doing so, for you sleep in the same apartment."

"Well, Katie, I'm dead beat myself," said Mr. M'Gaffney, with a yawn; "so I'll just take a tumbler of punch and go to bed. Why, you're yawning too, Mr. Scudamore! I think you'd better be off likewise. Biddy shall show you the way. Biddy! a chamber-candlestick for Mr. Scudamore. Pleasant dreams, my young friend; and may you to-morrow lay the foundation-stone of your future fortunes." As he said this, he shook me very heartily by the hand.

I was mightily pleased at the manner in which I had been received by Mr. and Mrs. M'Gaffney, and felt fully half an inch taller as I followed Biddy upstairs. Although I was fourteen years of age, I had been treated as a mere child by my father and mother; at Lempriere House I was only a schoolboy; but here, at No. 5, St. Ninian's Terrace, I was styled Mister Scudamore, and regarded as a grown-up person. One thing I wondered at. Why did Mrs. M'Gaffney speak with a strong Irish accent, while Mr. M'Gaffney talked like a north-country Englishman? Biddy afterwards explained the phenomenon. Mistress was "rale" Irish, and hailed from the county Wexford; while her husband was born of Irish parents in Liverpool.

My sleeping apartment, as Mrs. M'Gaffney grandly styled it, was in reality a shabby little garret, containing two turn-up bedsteads. One of these was intended for me, the other was occupied by Mr. Prawle, of whom I could see nothing at first, except that he had a very red complexion. But while Biddy was smoothing down my pillow, the light dazzled his eyes, I suppose, and awoke him. At any rate, he sat up in bed, rubbed his hands into a thick head of yellowish hair till it all stood on end, opened a very big mouth, stared at me with a pair of goggling blue eyes, and then exclaimed sleepily—

"I say, Biddy, what's the meaning of this? Is it daylight or candle-light?"

"Sure, it's candlelight, Mr. Prawle; so ye needn't be alarmed. Ye've got siven hours' good sleep forninst ye yet. It's only eleven."

"Then, why on earth——"

"Why, don't ye see, Mr. Prawle? Here's the new young gintleman, Mr. Scudamore, from London."

"How de do, Mr. Scrub——"

Mr. Prawle could get no further. His big mouth expanded into a tremendous yawn, and he sank back on his pillow fast asleep.

I did not sleep very soundly. My rest was disturbed by perpetual dreams. I was continually riding in railway-carriages, with all sorts of incongruous people for my fellow-passengers. First, Dr. Bagshot came and set me a copy of Latin hexameters; then a bare-footed girl drew near with a basket, and cried, in a pitiful voice, "Want chips!"* then Mr. M'Gaffney came galloping on one side of the railway-carriage mounted on Bruno, while Mrs. M'Gaffney rode on the other side mounted on Gipsy; then an awful voice muttered in my ear, "Macbeth hath murdered sleep—the innocent sleep," causing me to start up in a terrible fright, and stare about me.

* A familiar street-cry in Liverpool.

I believe it was Mr. Prawle who had played me this trick, though when I looked up, he was busily engaged in combing his hair before a little cracked looking-glass, and whistling a popular air.

"Well, Mr. Skidmore," he observed, glancing round at me—"I beg your pardon; I didn't catch your name."

"Scudamore," I said.

"Scudamore," he repeated after me. "So Biddy tells me that you're coming out with me. I shall be delighted to have your company; but at the same time think it right to inform you that there's a delightful shower of sleet falling, and about six inches of slush in the street. It never snows in this beastly, muggy hole of a place."

"I should like to go very much, if you'll let me."

"Let you? Of course I will. There, I've done with the basin, and shall be ready to hand over this magnificent mirror by the time you want it."

As soon as we were dressed we went downstairs into the kitchen, where Biddy gave us two cups of tea, very hot and very weak, and two hunches of bread, very sparingly besmeared with butter. We then put on our pea-jackets, turned the collars up, and went out into the chilly air of a miserable January morning.

There were very few people about the streets at that early hour, for the in-door artisans, whose work begins at six o'clock, were already inside their shops and factories; while the out-door labourers, who require daylight for the prosecution of their tasks, were only just beginning to show themselves. But when we reached the Saragossa Dock, which lay at some distance, all was bustle and animation. The *Jabez P. Skinner*, bound for New York with passengers and a general cargo, was being slowly warped towards the dock-gates. Her decks were crowded with emigrants who were frantically waving their hats and handkerchiefs to friends on shore, most of whom had apparently been sitting up all night, to judge from their sleepy faces. A crowd of at least a hundred or a hundred and fifty persons accompanied the vessel in her tardy passage towards the dock-gates, and probably none of them came merely from motives of curiosity. However long the departure of a ship may be deferred, there is always a great deal of business to be done at the last moment. Mr. Prawle climbed nimbly up the side of the ship, in order to transact his business with the emigrants, bidding me remain on the quay; and I amused myself while there with watching the various scenes around me, and listening to the Babel of voices. Here are some of the conversations I heard:—

"Thady, darling, ye'll write to me," cried a girl with a handkerchief tied round her head, and her apron to her eyes.

"No, that I won't, bekase I can't," answered a jovial young Irishman, who stood in the fore-rigging, and spun his brimless hat on his shillelagh by way of attracting the attention of his friends; "but the first praste I meet in Ameriky shall write ye a letter, Mary, and, plaze God, I'll send ye the passage-money in a twelvemonth's time."

Then came a man with a very anxious face, driving a great obstinate pig through the crowd. He addressed himself to the ship's cook, who said in reply—

"What d'ye want with that overgrown brute alongside at this time of day? My pig-pens are full."

The pig-driver answered,—"Sure, don't I tell ye the captain picked him out with his own blessed eyes in the market, gave me half the price down, and an order on the office for the rest?"

Amid all the confusion, I could hear the dockmaster's loud clear voice:—

"Now, then, my sons, take her along easy. Mind that starboard warp; don't graze her shins."

Then a red-faced gentleman, carrying an umbrella, pushed his way down to the ship's side, and shouted out, angrily:—

"Is that second mate aboard, or is he not? Oh! there you are, sir!" (*with a bow of mock politeness*). "I can see the peak of your gold-laced cap. I want to know why my nineteen cases, marked 'X Q' in diamond, are shut out?"

Second Mate (*blandly*).—"Really, sir, it's your own fault. Your goods came alongside too late for shipment."

Angry Shipper (*furiously*).—"'Tis false, sir.—Hallo! you rascal, what do you mean by this?"

Pig-driver.—"I ax your pardon, sir, if the pig got between your legs." (*Shouting*). "Now, then, Mister Cook! stand by to heave out a coil of rope, and I'll make it fast under his belly."

Ship's Cook.—"Ay, ay."

Angry Shipper.—"If there's justice to be got in the town of Liverpool, I'll have it."

Dockmaster.—"That's it, my sons. Side her along. There she goes."

In a few minutes more, the dock-gates closed behind the *Jabez P. Skinner*, and she floated on the broad bosom of the Mersey. In spite of the sleet, and the bitter east wind, and the crowded state of her decks, I longed to be aboard of her.

"She's one of Mr. M'Gaffney's ships, I suppose?" I said, addressing Mr. Prawle, as soon as we rejoined each other.

"Of course she is, else I shouldn't be down here."

"What a rich man Mr. M'Gaffney must be!" said I to myself. "This is only one of his ships, and she must be worth several thousands of pounds. I wonder Mrs. M'Gaffney cares to take in boarders; but I suppose she is fond of company."

"How many ships has Mr. M'Gaffney altogether?" I ventured to ask presently.

"I can't tell you. The number differs from one week to another."

"What! does he have fresh ships every week?"

"Ay; sometimes every day."

"How immensely rich he must be!"

As I uttered these words, Mr. Prawle stood still, and looked me hard in the face.

"I say, Scudamore," he said, "are you joking or serious?"

"Joking! I don't know what you mean."

"I do believe he's in earnest," muttered Mr. Prawle to himself. "Do you suppose Hailes, M'Gaffney, & Co. are the owners of that ship which has just hauled out of dock?"

"Certainly I do."

"Oh! you jolly greenhorn! Ho! ho! ho! Ha! ha! ha!"

Mr. Prawle stood and laughed at me in the open street, till my face grew as red as his own with annoyance.

"Come, old boy," he said at length, "don't be savage. We must all be green once in our lives, and you're not twenty-four hours old in Liverpool yet; but I couldn't help laughing at the idea of Hailes, M'Gaffney, & Co. being shipowners."

"But they say they are on their card."

"Yes, of course they do."

"And you told me so, Mr. Prawle."

"Never, my friend, never."

"You said that the *Jabez P. Skinner* was Mr. M'Gaffney's ship, and that he had many other ships, fresh ones, every week."

"I didn't mean that he *owned* them; I meant that he had business on board. If we send down one emigrant to a vessel, we call her 'our ship.' There are many worse fellows than M'Gaffney in the emigration business; he won't go out of his way to chouse a passenger; but don't you go and mistake him for a shipowner. What did your father pay for your coming here?"

"A hundred pounds."

Mr. Prawle screwed up his mouth as if he was going to whistle.

"Does that include your board?"

"No; we are to pay fifteen shillings a week for my board."

Mr. Prawle professed to be greatly astonished.

"I retract the observation," he said, "which I made just now about M'Gaffney's chousing propensities. I say, Scudamore," he added, after a pause, "I should uncommonly like to see your father."

"I shall be very happy to introduce him to you one of these days," I answered, innocently. "But why do you wish to see him?"

"Because he is so deliciously verdant. He must be the original Green Man from which the signboard at the top of Blackheath Hill was painted. Here we are at Goree Piazzas, and this is the door of our lovely counting-house. Enter, my youthful friend and fellow-clerk, and I will introduce you to the great Parker, our book-keeper."

The following extract from a letter which I wrote to my mother a few days afterwards will give some further idea of the kind of life I led at Mr. M'Gaffney's. I did not like it much; but I made the best I could of it, for my father's sake.

"I like Mr. M'Gaffney pretty well; but I see very little of him, as he is nearly always out. Mrs. M'Gaffney seems very good-natured. Mr. Parker, the book-keeper, is a grumpy old fellow; but I am sorry for him because he has such a dreadful cough. I like Prawle very much. He laughs at me a good deal,—he says I am so green; but he teaches me everything he can. He comes from London. His father is a retired ship-captain, and lives at Bow. This is a slack time for business, because very few emigrants go in the winter, and most of our business is with emigrants. I sometimes go with Prawle when he takes them about to the shops to buy the things which they want for the voyage; and it is great fun to hear them talk, they are so simple and ignorant—almost as ignorant as I am, Prawle says. The food is not very good. The tea is rather weak; but I should like it still less if it were strong, because it has not a nice taste. Sometimes we go home to dinner; sometimes Toohey, the messenger, brings our dinner in a large basin, and we eat it in the office. I don't sit in the evening with the boarders, who are all men, and mostly captains and mates of ships, because they smoke pipes and make a good deal of noise. Mrs. M'Gaffney lets me sit in her private parlour. I don't mean to forget all my Latin and Greek. I read an ode of Horace and a few verses of the Greek Testament every evening. Prawle has never learnt Greek, and only the Delectus in Latin; but he knows lots of things that I don't. He is very quick at arithmetic, he can measure goods,

and he understands how to explain things to the emigrants, who often fancy they have been cheated. Prawle has an uncle in Williamson Square, and he is going to take me to have tea there some evening. You want to know if I have ever seen Mr. Hailes, the senior partner of the firm; so I asked Mrs. M'Gaffney about him. She told me that he was in delicate health, and was making a 'tower,' as she calls it, in France and Italy. Prawle declares that Mr. Hailes has been making this 'tower' ever since he came to the office, and that he does not believe there is any such person in existence. Don't fret about me. I shall like the life better when I get more accustomed to it."

I cannot say that the life in Liverpool improved on further acquaintance. I found myself constantly wishing that I was back at Lempriere House, where, though I was only treated as a schoolboy, I lived with respectable, honourable people. I soon found that there were all sorts of shabby little tricks perpetrated in our office. Ships were represented as being on the point of starting, though Mr. M'Gaffney knew that they wouldn't sail for several weeks; emigrants were taken to shops where they paid very high prices for the goods they bought, part of the price being returned to Mr. M'Gaffney by the shopkeepers; provisions which were often quite unfit to eat were sent on board the ships. I used to complain to Prawle of these dishonest proceedings. He did not attempt to defend them; but he said it was the custom of the trade, and that an emigration-agent would not be able to make a living unless he made some extra profits by such practices. I often felt very melancholy, and longed to be either at home again, or else out at sea, away from the smoky atmosphere of Liverpool and the shabby doings of such people as Hailes, M'Gaffney, & Co.

There was one subject which Prawle and I were never tired of discussing, and I was always in better spirits after discussing it. Before I left Lempriere House rumours had reached England that some of the miners who had gone from Australia to California had returned to New South Wales, and had discovered gold there also. These discoveries were followed by far richer discoveries in Victoria, and great excitement took place in England on the subject. Ships were chartered for the purpose of carrying provisions and merchandise to the gold-diggers, and numbers of people began to take their passages for the land of gold. Every day we heard stories of tradesmen who were offering their businesses for sale, and of clerks who were throwing up their situations, in order that they might start for Melbourne. Prawle and I longed to go too. We were both thoroughly tired of the miserable, dull, grinding

life at M'Gaffney's; but we had no means of paying our passages. Prawle's father was quite a poor man, who lived on a pension allowed him by a shipowning firm at Blackwall, in whose service he had been. As for my father, I could not have the face to ask him to send me out to Australia, when he had impoverished himself for the sake of placing me in Mr. M'Gaffney's office. Day by day I grew more discontented, and I was preparing to do something desperate, when a circumstance occurred;—but I must tell this part of my story in a fresh chapter.

(*To be continued.*)

A British Boy.

Heir of a mighty name and noble race,
Strength in his arm, and frankness in his face:
How should his parents' bosoms beat with joy
To gaze upon their glorious British boy!
He bounds exultingly along his way,
From early morn till evening ends the day;
At cricket, races, ball, or other game
He shows the skill that won his fathers' fame.
Nor less in lessons when he goes to school—
He scorns the skulker, and the knave, and fool;
The ancient glories of his race he shares,
Their love of truth within his breast he bears;
Admires the tales of olden time that tell
How British men in fields of battle fell.
Their sons exult to think there still remains
The fathers' spirit in the children's veins.
How glad a picture does a group of boys
Present at play! how hearty is their noise!
Even in their very quarrels they retain
A thought of honour that they will not stain!
They do not use the coward's arm, a knife!—
But hand to hand they urge an equal strife.
And when the weaker falls, they do not smite
A helpless foe, but keep their honour bright.
Long may the British boy remain as now,
His heart as noble, and as frank his brow:
So that when boyhood ceases, and the man
Begins his great career, his brightest plan,
In all his schemes of business or joy,
Shall be to emulate the British Boy.

The Nohak-Burner.

By JAMES GREENWOOD.

CHAPTER V.

"A NEW NOHAK! A NEW NOHAK!"

BUT they blow and they blow, and nobody answers. Where is the priest, the servant of Nohak? What detains him on this occasion when he is so urgently requested? At all the huts where the sick are lying, mothers and brothers stand anxiously at the doors looking eagerly towards the forest, and shading their eyes with their hands that they may the more readily discern his coming. By this time the mysterious fire has died out, or so nearly that the smoke of it is scarcely different from the thin blue mist of morning twilight. By this sign its purpose should be accomplished, for when the Nohak fire burns out, the life it was kindled against expires too. But whose life had expired in the night? No one's, save a little child—a mere month old baby—of croup. To imagine that so tremendous a fire would be raised in behalf of so insignificant a creature was absurd. The king, for whose safety his subjects had trembled, was hale as yesterday, though the fact of his being astir so very early proved that he was not an exception to the general perplexity and uneasiness. Louder still were the shell trumpets blown, and at last with good result.

The Nohak priest is coming! The grey of morning has not, as yet, ripened into white day, so that they cannot well make out his figure in the distance, but that it *is* the priest of Nohak there can be no doubt, since not only has he come from that part of the forest where the sacred hut stands, but he bears in his hands the sacred staff and pot, the fire of which glows as he swings it, and twinkles like a red star.

As he approaches closer, however, the voices that were raised to welcome him grow less vociferous, and presently cease entirely, while they that had been leisurely in their houses regarded each other in silent amazement. It was the Nohak priest, and yet it was not! The priest is a bent man, with his head white and bowed; this is an upright man, with black hair, and he takes long and free steps, like a strong young man. Nevertheless he carries the sacred fire-pot; and therefore without doubt he is the Nohak priest.

As he approaches the first hovel, at the door of which the shell trumpet is hung, the watchers recognizing him—they are indeed no other than the old thatcher and his family—utter an involuntary cry of astonishment; but as the priest waves them aside with his staff, they fall back, and he stalks into the hut, without deigning to cast a look even to the left or right of him. Huddled in a corner is the old mat-maker's wife, quaking and groaning, and being too old to have much care for life, almost hoping to hear the Nohak priest declare that the magnificent fire of the night previous was raised on her account; but really there is nothing but fright the matter with the old woman, as the priest at once perceives. So, touching her with his staff, he simply says:—

"Why lie there? Nohak has ceased to burn," and then passes out of the hut without another word.

And truly it did seem either that the old woman's groaning and quaking were without reason, or that the strangely translated Nohak priest had, by a mere touch of his staff, cured her; for as he turned and left the hut she scrambled to her feet, and nimbly as the rest of them followed him to the next hut, where an equally speedy and miraculous cure was effected. Now the people could no longer restrain utterance of their amazement, and loud shouts of "A new Nohak! a new Nohak!" were heard on every side; "the gods have recalled our old priest, and entrusted the staff and fire-pot to Arri Winnikeep!"

It augured well for the impostor's success that the mere utterance of his name was potent to set folks skipping and running, who, a moment before, could not rise from their beds. Before he had proceeded half through the town the wonderful news had reached the furthermost corner of it, and all sounds of shell-blowing had ceased, and the hale and the sick, as well as those who had nursed them, came hurrying up from all quarters. In the centre of the town, close by the king's palace, was an open green space, set apart for marriages and marriage-feasts, and just at this spot the new Nohak was brought to a standstill, in consequence of being so thickly hemmed in on every side. They did

not press closely against him, however. That it was Arri Winnikeep, the son of the old spear-maker, was apparent to all, but that only made the miracle the greater. Had they discovered that the sacred emblem had been entrusted to one amongst them favourably known for his wisdom and sagacity, the marvel would not have seemed nearly so great; and they loved marvels. They at once recognized the staff and fire-pot, which their old priest, and, according to tradition, every other priest, had carried since the founding of Tanna, and that alone was sufficient for them. So they made a ring about the new priest, and with looks of awful astonishment uncovered their heads, as though he had been the king.

And truly they might well be excused, since he looked not in the least like an impostor. He carried his head erect, and there flashed from his eyes, growing stronger each moment, a strange light, in reality born of scorn and triumph, but easily to be mistaken for inspiration. Always above the stature of ordinary men, he now appeared taller by fully an inch, his neck was set so pridefully. He looked nothing like the Arri Winnikeep of yesterday, the fop, the ape of his betters, the foolish fellow whose consequence found a grave in an empty wine-jar! Who would dare tell this man that he had best betake himself to the bellows and anvil, and make war tools, as had his father before him? This was what the daring impostor read in the afraid and cringing looks of all about him, and who can doubt that such evidences of his success were to Arri Winnikeep's bad spirit what the falling rain is to poison herbs, causing them to raise their heads and flourish?

Last to arrive were Kiri Moa's three brothers, and when they discovered that what the people had shouted was true, they were so much amazed that for a minute they could only gaze humbly, and with their mouths amazedly agape. They stood a little apart from the throng, and whispered together, and then they pressed forward and stood fairly before him, looking him in the face. But the false Nohak quailed no more before them than the rest. Indeed, you would have judged, from the indifference with which he returned their searching gaze, and then turned away to puff with his breath the flagging embers of his fire-pot, that they were strangers to him, and men in whom he had no kind of special concern.

Kiri Moa's eldest brother was the first to pluck up courage to address the impostor.

"The man who carries the sacred staff and fire-pot is undoubtedly he whom the gods of Nohak have chosen as their priest," said he.

"Praise be to the gods of Nohak," responded the priest briefly, at the

same moment holding the hollow of his hand over the fire, and then holding it to his mouth, as though inhaling its spirit, just as he had seen the old Nohak priest do.

"Praise be to the god of Nohak," responded Noa Kiri, devoutly. "Still, this change is so sudden and unexpected, that curiosity opens the lips that otherwise would remain sealed in one of reverence."

"Wherefore hath a man lips if he may not speak with them?" asked Arri Winnikeep, solemnly.

"Then will I speak," replied the warrior, somewhat emboldened by the priest's language (for, though he had doubts, there were the staff and pot, and Noa Kiri, with all his faults, was a true Tannese). "How is it with our old friend the Nohak priest, and why comest thou in his stead?"

"If Noa Kiri is well assured that the gods of Nohak will not resent his curiosity, I will venture to inquire concerning it," replied Arri Winnikeep, regarding with a steady gaze the man whom he so much despised.

"Nay," cried Noa Kiri, hastily, "I said not that; as well as any true believer, I know that the acts of the gods of Nohak may not be questioned. It is of thyself, thy old self, Arri Winnikeep, of whom I sought information."

"There is no longer Arri Winnikeep; he is dead," answered the brazen cheat, with an unmoved countenance.

"Dead! When did he die?"

"At the moment of my birth; he died that I might live."

"Then if he died, Nohak was burnt for him," observed Noa Kiri, "was it so?"

"Is there a man, with his eyes, in Tanna, that cannot answer you?" demanded the false priest, severely; "nay, nor a man without eyes, for surely even such a one must have felt the warmth of last night's burning."

"And did Rassewaa see this great fire?" asked Noa Kiri. Rassewaa was the name of the old Nohak priest.

"'Twas made for him," answered Arri Winnikeep, with a wicked smile, as he thought how much of truth there was in the assertion. "Nay, I may as well tell thee all, since I feel that the gods will permit me. Last night, as I lay on my mat, the light of the great fire we all saw shone through the crevices of my hut, and awoke me, and for a time I sat up frightened and alarmed; but in the midst of my fear my door opened, as by a wind, and, though no person was visible, a terrible voice spoke to me. 'Rise, Arri Winnikeep,' the voice said; 'those

whom fools despise and scoff at, the gods of Nohak delight to honour. Rise thou at once, and get thee to the wood where Rassewaa's hut is, and where he is now burning.' When the god began to speak to me," continued the impostor, "I trembled, and hid my head; but as he proceeded I drew courage from his kind tone, and rose quite firm and bold to do his bidding, and, guided by the light of the fire, easily found my way to the spot indicated. And close by the hut I discovered a pit, in which were the bones of a man consuming in fire, and as I looked I grew giddy and reeled, and, as I think, fell into the fiery pit. I think this, because when I came to my senses I was lying on the brink of it at the other side, and once more waking myself, heard the voice of the Nohak god addressing me, said, 'Now thy ill nature is burnt out of thee, and thou art fitted to serve the gods of Nohak; therefore take up thy staff and fire-pot and go thy way.' And here I am. If there are any here who disbelieve, let him follow me and come and see."

So saying, the bold cheat stretched his staff before him, that the rush might make way, and turned his steps towards the forest, without once looking behind him, as though he took no concern as to who might come after him. And very many did come after him, until they arrived at where the little hut of boughs stood; and beside the hut there was to be seen the pit Arri Winnikeep had spoken of, and there in the pit were the bones he had also spoken of, bleached and whitened by the action of the fire. Then they were convinced indeed, and at once raising their voices, praised the gods of Nohak, and Arri Winnikeep, their chief priest.

CHAPTER VI.

IN WHICH THE SACRED FIRE-POT TELLS TALES.

NOW, indeed, did it seem to the wicked Arri Winnikeep that he had achieved his purpose completely. True, the king had not as yet acknowledged him as the true Nohak priest; but the voice of the whole people was with him, and he knew his majesty too well to doubt that under such circumstances he would raise objections. Besides, for all his boldness and bravery the king was not particularly wise, and was likely to be led by popular clamour against his own convictions. "It would go harder with me if such a fellow as Noa Kiri occupied the royal seat," thought the impostor; "if there is a man I have cause to fear it is that villain; he sees through me now at least half way, I

verily believe, and would spoil me, only that he is held back by his ridiculous superstition. I shall have to 'make fire' for the silly fellow if he persists in laying stumbling-blocks in my path."

But there were no stumbling-blocks in his path at present. Never did an imposture succeed so undoubtedly. Already they gave him credit for working a miracle. "Before he approached the town," said they, "the air was rent with the blasts of Nohak horns—everywhere there was sickness and anticipation of death, but no sooner did he appear amongst us than, with the exception of a very few, all were made sound and well, and that without being called on to sacrifice so much as a single measure either of corn or honey. This was told to the king, and though when the matter first came to his ears he looked slightly suspicious, and had it in his mind to make inquiries as to how Arri Winnikeep had passed yesterday, and what time in the night it was when he left his hut to go to the forest, according to the commands of the Nohak gods; but finding the people all restored, and amongst them sage men, to whom he was in the habit of applying for advice and counsel; and being, as before remarked, as easy as a child (except in war matters) in his ruling, he presently embraced the new Nohak man very cordially, and, as far as lay in his power, to be at evens with the gods who had selected such a man for their favours, he bade the new priest make any request he chose, and it should be immediately granted.

This, indeed, was good luck, beyond his expectation. Had he a request to make? What had induced him to do a second murder, and proclaim himself the elect of the gods? Was it his ambition to enjoy the sacred distinction that induced him? No. It was that he might become so powerful that his most extravagant desire could not be refused—even though it be the hand of Kiri Moa as his wife. And he would have been content to wait for months for his great reward so that he could be certain of its ultimate attainment; and here it was, before his dearly earned power was two hours old, dropping to his feet like a ripe nut from the tree!

"Although last, thou, O king, by permitting the light of thy favourable eye to shine on me made me the richest man in Tanna," replied he, humbly, "yet if I might be even further honoured, there is yet a jewel my heart craves for."

"My jewels, every one, are at thy bespeaking, save the big pearls that tip my ruling rod," replied the king, good naturedly.

"If I might dare, I would say that the jewel for which I yearn is to my mind more precious than the veiling of thy sceptre, O king, as well as its setting," said Arri Winnikeep. "Kiri Moa is that jewel, and

what I would request of your majesty is that thou wilt intercede with her brothers, that they will give me her for my wife."

"With all my heart," answered the king, readily, and very glad to have got off so cheaply; for had the priest asked even his most costly gem, he could not well have refused it. "Kiri Moa, as thou sayest, is indeed a jewel amongst women; still, to be the wife of the Nohak priest is no mean thing. What sayest thou, Noa Kiri?" For it happened that the young woman's brother was present, and within hearing.

"Doubtless it is an honour to reckon the Nohak priest amongst one's relations, O king," replied Noa Kiri, firmly, "but such as we are we are content to remain."

"He must be a bold man who denies Nohak!" whispered the king to his warrior. "Decide not too hastily, Noa Kiri."

"When Nohak comes for our sister she must go," answered Noa Kiri, aloud; "but how shall we dismiss her in health to sit by the fatal fire?'

Hearing this, Arri Winnikeep gave the speaker a glance full of malice, and so sudden that no one else took note of it.

"It is well," he exclaimed; "the brethren of Kiri Moa are brave; and while they live she will need no other protector. May they long live for her sake!"

And so saying, he made obeisance to the king and went his way. But no sooner was he out of hearing than the friends of Noa Kiri, amongst them the king himself, came about him and implored him to reconsider his judgment. Although there was nothing in the words themselves the Nohak priest had uttered that might be quarrelled with, there was no knowing what they might portend; the Nohak priest might take early opportunity to "burn" for him; and when Noa Kiri called to mind the diabolical glance that prefaced the soft-sounding speech, he thought it not unlikely. To the entreaty of the king and his other friends were joined those of Noa Kiri's two brothers (which was no wonder, considering how closely they were concerned), and the result was that before sundown Arri Winnikeep was sent for to the king's palace to hear from Noa Kiri a formal promise that when the next moon was at its full, Kiri Moa should become his wife.

This was all very well; but Arri Winnikeep would much rather have avoided this delay of a month, and considered that the marriage should take place immediately. His success was so new that as yet he had not opportunity to test the strength of the threads that supported it, and it might any moment break down. So many unexpected events happened in a month. Something, indeed, had already happened that perplexed him mightily.

It was this. Ever since the fire-pot had been in his possession, it, or rather its contents, had ailed something. The fire would not burn evenly. It would burn very well at bottom, and at top, and at three of its sides, but on the fourth side there was always a dull spot, as though there lurked a bit of wood that no fire was strong enough to dry of its greenness, and there lay, black and sullen; stir the fire how he might there the blot was. It might vanish for a moment after he had raked the glowing embers from side to side, but when he looked again there was the dull spot growing duller even as he regarded it. "Nakinio take the ugly thing," muttered the impostor; "it is because I have not yet learned how to manage it, I suppose: it will burn better to-morrow, I'll be bound."

This was on the first night after he had by such foul means become possessed of the sacred pot that he said this, and lay down and went to sleep, thinking no more about it. But when the morrow came, and he renewed the fire in the clay pot, there was the unaccountable spot as it was yesterday, with this difference, that now it was larger—not much larger, but still enough to be unmistakable. He turned out the embers, and replaced them with fresh ones, all dry and ruddy, from his cooking fire, and for a little while it seemed as though the dull spot was conquered; but in a little while the spot began to grow again and to spread.

"It cannot be a fault in the fuel," said he, passionately; "it must be in the cursed thing itself." So once more he turned out the embers, and, setting the pot to cool, then took it in his hands and examined it closely. His last conjecture was the correct one; it *was* something in the clay pot. Although the fire had burnt in it all night and all the preceding day, there was a spot of damp outside the pot and extending right through to the inside. Nay, it was more than damp, it was quite wet, and as he drew away his finger and looked at it, it was as though he had touched blood.

For a moment the guilty wretch was struck with terror; but he was too deeply drenched in crime to greatly mind this slight sprinkling of remorse, and with a forced laugh he said:

"Why, what a silly fellow I am? It is a speck of the blood of the foolish old priest. It is fortunate that I am the first to discover it. It is strange that it has not dried after all this time; but there is no accounting for the tricks blood—especially human blood—will play on a man. This might have led to any amount of danger. However, now there is an end of it."

So saying, he plucked a handful of dry grass and rubbed the red spot on the outside of the pot quite clean and dry, and then prepared to go his daily round through the town.

Nevertheless, the evil was not cured—nay, it grew and increased. The fire in the pot still burned unevenly, and when the ear was closely applied a slight hissing sound might be heard, which was the fire complaining of the dampness of the pot. That very morning the impostor discovered a further cause for alarm. Observing the Nohak horn hung at the door of a poor man he went in to see him, and set his fire-pot down by the hearth that he might more conveniently feel his pulse, and when he presently took up the pot again and prepared to take his leave, where it had stood was a faint ring of red distinctly observed. As well as he was able, while he lingered to give directions as to the treatment of the sick man, he endeavoured slyly to obliterate the red stain with his feet, and when he got outside he determined to pay no more visits, but hurried home, cursing the pot for its unfaithfulness.

Perhaps, thought he, since the blood on the thing will not consent to be rubbed out, it may be burnt out. So he made a fire, and when it was all aglow, he thrust the clay-pot into it, and raked burning embers over it to the depth of a foot. In a little while he had the satisfaction of seeing the vessel burning to a white heat, and then with a laugh at his ingenuity, he raked it out that it might cool sufficiently for handling.

And it did cool, but matters were not mended. Such parts of the fire-pot as were uncontaminated cooled white as snow, but the other part—the damp part—cooled to redness that stared out the more conspicuous from the chasteness of the surrounding. It was larger than ever, the tell-tale spot. Before the pot was burnt, the stain was no larger than the top of a finger; now it was a broad smudge, such as might be made with the full breadth of a man's thumb. Again and again he cast it into the fire, but it was all of no use, the vessel only became the whiter, while the spot remained just as crimson, and just as terribly moist.

It was late in the night ere he became convinced that it was worse than useless trying to destroy the red place (fortunately not once through all the day had a Nohak horn summoned him to the town), and the remainder of the night till morning the unlucky wretch consumed in undoing the work that all day long had occupied him. It would never do to carry the sacred pot abroad red and white, as it now was, so he mixed grease and brown earth together, and made a paste, which he rubbed into it, until it assumed some such complexion as it bore before it was tampered with. Still, however, the red spot showed duskily through all.

Barely had he completed the job to his satisfaction when a sound of horn-blowing came from the town, calling him, and sadly and in dread

he took his staff and pot, and went forth. But the sacred fire burnt all on one side, even more than yesterday, and before he had got clear of the forest the spot was larger than when he started. "This will never do!" thought the guilty man; "to let the people discover this mystery will be to bring suspicion on me at once. Their heads are so filled with foolishness about this hateful Nohak pot that they would certainly turn against me and put me to death if they knew what had happened to it since it passed into my keeping. Of course it is all nonsense about sacred fire, and I can act Nohak just as well without as with it; but this they will never believe. What I will do is to wrap the pot round with several leaves, and should they inquire why it is done, it will be easy to say that the Nohak gods command it."

(To be continued.)

TO PUZZLES.

On Pages 125—128.

1. A gentleman.

2. Cryptograph.

Farewell, a long farewell, to all my greatness!
This is the state of man: To-day he puts forth
The tender leaves of hopes; to-morrow blossoms,
And bears his blushing honours thick upon him.
The third day, comes a frost, a killing frost;
And—when he thinks, good easy man, full surely
His greatness is a-ripening, —nips his root;
And then he falls, as I do.

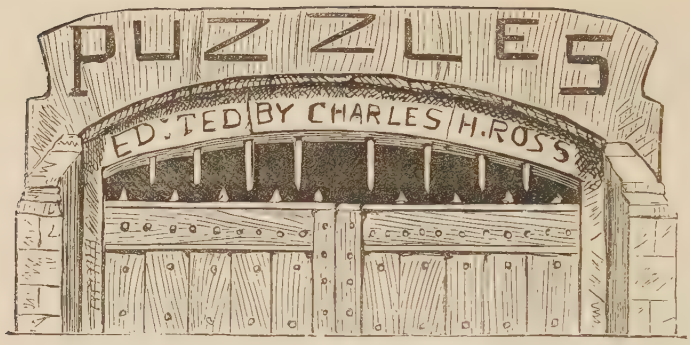
3. Lotus, Egypt.
4. Blenheim.
5. Agincourt.
6. Bannockburn.
7. Turnstile.
8. Button.
9. United.
10. Lane, Amen, Nemo, Enos.
11. Ebro, Bohn, Rhyl, Only.
12. Laid, Acre, Iron, Dent.
13. Encouragements.
14. Grotesque.
15. Hereditaments.
16. Quintessence.
17. Disproportionately.
18. Pharmaceutically.
19. Charm.
20. Herring.

21. Cryptograph.

Friends both, go join you with some farther aid;
Hamlet in madness had Polonius slain,
And from his mother's closet hath he dragged him;
Go, seek him out: speak fair, and bring the body
Into the chapel. I pray you haste in this.

22. Derg, Erne, Neagh, Mask, Allen, Ree, Killarney, *Denmark*.
23. Quentin Durward—Sir Walter Scott.
24. Turkey—Greece.
25. Cowper—Milton.
26. Culloden.
27. Malplaquett.
28. Bunker's Hill.
29. Marengo.
30. Parrot.
31. Chaucer—Raphael.
32. Canterbury-bell.
33. Tom Hood—The Elm-tree.
34. Madagascar.
35. Pomp, Over, Mere, Prey.
36. Palm, Area, Lean, Many.
37. Neat, Each, Acme, Then.
38. Tend, Ever, Nero, Drop.
39. Whip, Hide, Idle, Peer.
40. Nectarine.
41. India.
42. Chili.
43. Persia.
44. Italy.
45. Quito.
46. Natal.
47. China.
48. Thibet.
49. Because it made Ghosts of Hosts.

50. Now came still evening on, and twilight gray
Had in her sober livery things clad;
Silence accompanied; for beast and bird,
They to their grassy couch, these to their nests
Were slunk; all but the wakeful nightingale,
She, all night long, her amorous descant sung
Silence was pleased.



1.

Cryptograph.

Ipy yaxe bqvq lys pmzdxjqo ijbxop,
Jaymnp lys fyzwjojafj bah pjbxop,
Bah xjrqmsj ipja prq iysv rq hyaj,
Oy sjbh prq dyyv
De fprzaje ayyv
Ys qosyxx bo qjooran yl opj qma ;
Ipy oyrxq bq jkjse zba qpymxh oyrx,
Lys lbrs sjibsh jsjfo bah lsjj :
Oprq rq opj zba—
Obj djqo yl zja—
Oprq rq opj zba ij zjba oy dj.

2. Who always sits with his hat on before the Queen?

Hidden Towns.

3. Let me hope, kind friends, for your approbation.
4. He was a mad rascal who tried to kill Bismarck.
5. From morn to eve, from eve to morn.
6. December never was so wet as this year.
7. On that slope rabbits abound.
8. Where is the *Saturday Review* published?

9. What is the difference between a battered fourpenny piece and a new florin?

10.

A plant.
An Indian coin.
Sleep.
A Roman emperor.
Sick.
A vessel.
An adverb.
A roast.

My *initials* and *finals* will give two celebrated commanders.

11.

My 1, 2, 3, 4 is that which grows on the back of an animal.
My 1, 5, 6, 10 spells the same.
My 1, 8, 9, 4 again the same.
My 1, 11, 12, 10 the same.
My 4, 2, 1 not high, the opposite.
My 4, 2, 5, 7 is used for spinning.
My 7, 8, 1 means to cut.
My whole is a town in Australia.

12.

My *first* is a verb, my *second's* the same ;
My *whole* is a bird with a curious name.

13.

My *first* is a tool used by my *second*, and my *whole* is a suburb of London.

Word Squares.

14.

A water engine.
A range of mountains.
A companion.
A petition.

15.

A bird.
A cord.
An epic poem.
A house.

16.

Grain.
Space.
To incline.
A strong zest.

17.

A reckoning.
Confidence in the future.
Exposed to view.
A species of wine.

18.

A prominent feature.
Longer than broad.
A prudent person.
A woman's name.

19.

My 5, 2, 6 is part of the head.
My 6, 2, 8 is an animal.
My 4, 2, 7, 8, 5, 6 is a director.
My 3, 5, 2, 7, 8 is smallest.
My 8, 2, 4, 5 is subdued.
My 10, 5, 2, 6 is not far off.
An eminent statesman.

20.

A county in Great Britain.
A town in England.
A name peculiar to an abbess.
A city in Bavaria.
A mother of pearl.
The parting word.
A town in China.
A town in France.

The *initials* read downwards, and the *finals* upwards, will spell your name.

21.

My *first* is to watch; my *second* is an entrance; my *whole* is a seaport in Scotland.

22.

A river in Africa.
A famous statesman.
A noted archbishop.
A town in Hampshire.
A portrait-painter.
A town in Berkshire.

The *initials* and *finals* read downwards, will give the names of two of our greatest admirals.

Battles.

23. 200 noude
24. 1050 enof
25. 200 syre.
26. 601 Ghee

27. Tire grimnation.
28. Contrive to nail ass.
29. S. I fit a cover in.
30. I believe dart.
31. Game means mint.
32. I reside at Conn.
33. Hear the tons.
34. I break not maids.
35. Dine at one in trim.
36. Need hot ham.

37.

Crytograph.

Olqr x4fqlzd 2fspt z3 nczm4mlb Qrldpk sttets fdblatph, ttd lenczm4mbt,
Twntcltdxt z3qtd krzok fk qz mt qcft.

38.

1. A treatise.
2. A sharp instrument.
3. A tint.
4. A body.
5. A lock.

39.

1. Passion.
2. An organ.
3. A colour.
4. To destroy.
5. Payments.

40.

1. A fish.
2. A metal.
3. A girl's name.
4. An insect.

41.

My *first* is fresh, my *second* warmth, my *third* a conjunction, and my *whole* the name of two large islands.

42.

I sit and muse by the sad sea waves,
And gaze on the scene of many graves ;
And I see a vessel outward bound,
While my *first* lies scattered all around.
At a party sits a merry crew,
The laughter's gay, and therefore happy too ;
And loud huzzas do follow each toast,
For my *second's* there, and o'er it boast
Heroes who never from home have gone,
Yet vaunt of ventures, and wagers won.
My *whole* it shows how short is life,
How we should prepare to quit this strife.

43.

Cryptograph.

Plc evu yllbhrd afb tmluzbhk'p zkfsc.
Vvl iprqse ypjsld fbhtbz gyz zolypa ;
Ykk dlhkp hla znxyiilq cvp x dffsc,
Xub jdpj 'ygkn rell pbzppbbz rl ycpa.
Qosb tyk, afb znlyr lm zipqp hla jyol,
Pfzcp vl qpkb'z csllqmsi zcx ;
Xub ehtfue pdciscz h kltcka relef,
Afrz kbsrg plqb cqlpkdrv.

44.

I am a word of nine letters, and a very famous statesman.

My 5, 6, 3, 8, 4 is a halt.
My 4, 3, 6, 9 is a fruit.
My 2, 7, 8, 1 is protracted.
My 5, 3, 2, 6 is a useful domestic article.
My 5, 2, 3, 6, 9 is a schoolboy's companion.

45.

'Twas in a neat and trellised dale,
All deer were still at rest,
I saw an adder's twisted tail
Steal near a linnet's nest.

It went inside, its tail as well,
And sat anear a twit,
At last I saw it in a dell,
As near it I did sit.

The above lines are entirely taken from one word, which is required.

46.

How pleased was 4, 5, 6 when his 4, 5, 1 was in 6, 5, 4, 7, 5, 3 ;
Each 6, 5, 8, 9, 3, 4 of 4, 7, 8, 9 kept him from his 8, 2, 6, 8, 2 and 4, 9, 2, but oh ! his 1, 5, 9, 8 was neglected, though he truly 8, 9, 2, 3, 4 to be a 1, 5, 9, 4.
Nothing pleased him so well as my *whole*, not even his 1, 7, 1, 9 ; and how he longs for Christmas to come round that he may 7, 6, 7, 4, 2, 4, 9—7, 4 again.

A word of nine letters.

47.

My *first's* a gentle kind of blow,
An English word for *à propos.*
My *next's* a scene of angry strife,
Which often ends in loss of life.
My *whole*—a man like William Tell—
One who loves his country well.

48.

Long ere there stood a pretty town
Beside that Ouse's flood,
Which daily to the sea pours down
Its tributary mud,

I was; and many a wife and maid
Lamented at my birth;
"Henceforth" (perchance they sorrowing said)
"Our lives are little worth!"

That generation passed away,
And others still succeeded,
Whilst I, unknown, forgotten lay
By rich and poor unheeded.

Until at length some learned man.
To prove his theories true,
Discovered me, and so perhaps,
Young puzzle-brains, may you.

But I'm antique, and it may help
Young heads to my solution,
If to my ancient form I add
What makes a revolution.

Also two legs, and then I stand—
To walk I am not able;
Yet moving quickly, I frequent
The garden, yard, and stable.

A humble thing! ah, give me back
My former lofty station;
Beloved of those who love to tell
The by-gones of a Nation.

49.

My *whole* is my *first*, a most desolate man
That gets all the money his *second*,
But let him scrape up as much as he can,
And he still will a poor wretch be reckoned.

50.

My *first* was never seen alone,
My *second's* in no doubt;
My *whole* defies you, readers all,
Even to find it out.

51.

I am a word of four letters; you'll find my *first* by doubling my *fourth;* and my *second*, if you divide my *third* by *fifty*.

52.

My *first* is used in making my *second;* my *second* backs my *first;* and my *whole* is used to keep my *first* in order.

53.

I am a fruit; transpose me, I am a fish.

54.

When is a horse like a bad egg?

55.

My *first* is a parent, the children all say,
For they run at his call, his words they obey.
He loves them and guards them, and never forgets
How precious they are, the dear little pets.
On sanguinary plains my *second* is seen;
At pleasures and picnics it ever has been;
The sedate and the grave, the gay and the young,
In it have debated, in it they have sung.
While my *whole* it is clear, and is, past a doubt,
Used by men who make things, and don't wish them found out.

56.

I am a word of ten letters.
My 10, 8, 3, 6 is trial.
My 9, 4, 3, 10 is a resting place.
My 1, 8, 5, 6 is laceration.
My 3, 8, 2, 7 is part of a common verb.
My 2, 9, 6, 8 is to note.
My whole is an evil feeling.

57.

I am a word of eleven letters.
My 5, 4, 10, 9, 7, 8 is to overtake.
My 1, 2, 6, 6, 7, 10 is to instruct.
My 3, 2, 8, 11 is not any.
My 6, 2, 10, 11 is matter.
My 4, 5, 7, 8, 10 is soil.
My 6, 7, 4, 11 is an insect.
My 8, 5, 6, 11 is fame.
My whole is corrupt.

58.

A poem.
An island.
A county of Scotland.
A place of worship.
Ancient magistrates.
A poet.
A mountainous republic.
One interested in the volunteers.
A large body of men.
A painter.
A province of Spain.

The *initials* read forwards name a poet, and the *finals* read backwards one of his works.

59.

Double Acrostic.

Where Macedon with Persia strove,
What monkeys seek within the grove,
A gift to cut love, old folks say,
A curse England has done away,
What no poor dwarf has ever been,
What took the life of Egypt's queen,
What gives man heart to win the fight,
What most offends the spendthrift's sight.
Two words you'll make
With the initials and the end,
Which form a bridge
To join you with your absent friend.

60.

Cryptograph.

Hlcc hnebxj hiup ebm hnebpt cipy ;
Xh biy gxspy ntp oxtnc jnap ;
Ebxyp ntp dpntcy ebne zptp biy pmpy :
Sxebisq xh bij ebne axeb hnap,
Gle axeb ylhhpt n ypn-obnsqp
Isex yxjpebisq tiob nsu yetnsqp—
Ypn-smjdby bxltcm tisq biy wspcc :

Aisq-axsq.

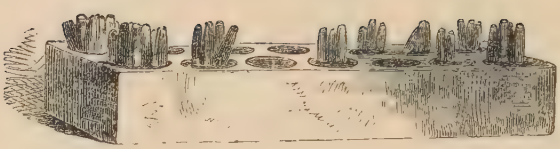
Bntw ! sxz I bpnt ebpj—
Aisq-axsq, gpcc
Bntw ! sxz I bpnt ebpj—
Aisq-axsq, gpcc.

61.

Double Acrostic.

1. A vessel.
2. A musical instrument.
3. A report.
4. To conclude.
5. What concerns every one.
6. Level.
7. A Greek letter.
8. A language.
9. Genuine.
10. An animal.
11. What is on every battle-field.

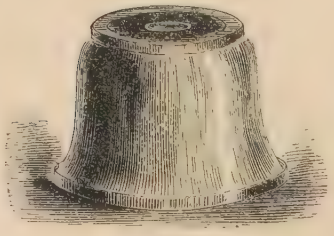
My *initials* read upwards, and *finals* down, give the names of two statesmen.



PUNCH-BOX.

DIE-SINKER.

PLATE.



DIE-BLOCK.

LAY BOTTLE.

DIE-SINKING.

TRADES CONNECTED WITH SCIENCE AND ART.

By THOMAS ARCHER.

DIE-SINKING AND METAL-ENGRAVING.

HAVING learned something of printing and of engraving on wood, it naturally follows that we should try to find out a little about the equally ancient art of engraving on metal. In the very earliest times, an account of which is to be found recorded in history, the art of engraving on metal plates and some other substances was practised, and what is still more remarkable is the fact that the tools now used for that purpose differ but little from those used by the workmen of antiquity.

The specimens of engraving that now exist among the relics of ancient Egypt show that the art of making designs upon metal, or upon various hard gems and stones, was known to that wonderful people. There are very large numbers of such examples in our British Museum and in other collections of ancient curiosities, which are still remarkable for the beauty and finish with which the work is executed. Indeed, some kinds of engraving were practised in the earlier days of the world's history which would be very difficult for us to imitate; for the tools now used would scarcely be durable enough to cut designs upon such hard substances as porphyry and jasper, and our steel is neither hard nor durable enough to make much impression on these stones. It must be remembered, however, that the workmen of old were more patient than we are, and that, as their productions were only intended for the few wealthy citizens or powerful rulers, and not for the common people,

they frequently spent months in the manufacture of articles that we should esteem unworthy to demand a few days' labour. It is thought, therefore, that these gems were engraved by means of steel gravers struck with a small mallet, and that the cutting was afterwards ground smooth with some sort of hard powder, made perhaps by pulverizing a piece of the same kind of stone. It is certainly strange that the well-known art of engraving should not earlier have led to the discovery of printing in some such form as that with which we are now acquainted, as well as by the method of impressing designs upon soft clay; but the same condition of mankind which kept most of the works of art in possession only of the rich and powerful, perhaps gave no stimulus to an invention for which there seemed to be so little demand. It is evident from the Sacred History that engraving was known and practised before the time of Moses; so that, although the Israelites probably became more proficient in the art during the time of their captivity in Egypt, the Patriarchs themselves were familiar with the "signets," or stamps, which appear to have been used as seals to impress signatures or marks; and it seems evident that they were so used for the purpose of ratifying agreements, though it is now difficult to say in what manner and on what substances the agreements themselves were written, or whether the seals were only used as significant of a solemn and personal obligation, by marking land, goods, or other objects, when they were transferred from one person to another. It seems, from all that can be learnt on the subject, that these metal seals were frequently worn either as part of a bracelet on the wrist or on a finger-ring; for it was necessary that they should be kept securely, since they represented the signature of the person to whom they belonged, and the commands of governors and persons in power were authenticated by being stamped with this seal, or "sign manual." It may be imagined, then, that the signet was of great importance, and that the seal of a prince or governor was sufficient authority to condemn a person to death, or to secure the payment of money or the transference of property from the State. The giving up of a seal, therefore, was to transfer the power which it represented, and there are several allusions to this act in the Sacred Scriptures. "Pharaoh took off his ring from his hand, and put it on Joseph's hand," (Genesis xli. 42) when he desired to give a proof of his entire confidence; and the possession of a man's seal was in those days to have considerable power over him and his property, since it was equivalent to what in our own time would be the opportunity of obtaining his signature to any agreement. These seals were often made of silver, and some of them, as we have already mentioned, of precious

stones; and the design was probably often cut so that it stood out in relief like our present type, and could be used for stamping articles or records with some kind of coloured substance like ink. The art of engraving on metal was not confined to seals, for in the book of Exodus we read an account of engraving work, some of which was doubtless very elaborate, and required a great degree of skill, since it is evident that there were various kinds of design and execution employed, and both gems and gold were used as the materials on which the sacred symbols were to be wrought.

There are few more interesting objects than a seal, for it suggests some of the most ancient as well as the most important events recorded in the history of the world. The great granaries of the kingdom of Egypt were closed and the doors sealed with a seal of clay; the mouth of the den into which Daniel was cast was sealed with the king's seal; and the Old and New Testaments abound with allusions and illustrations which show how frequent and important was the use of these engraved signets in the earlier ages. Even in our own time, although the seal is not in such common use, it is still appended to State documents and to many agreements which are of serious importance; and the legal declaration by which a deed is declared valid is accompanied by the placing of the finger of the person who attests it on the spot which should contain the seal.

It is recorded by Herodotus that Aristagoras appeared before the King of Sparta with a tablet of brass in his hand, on which was inscribed every part of the habitable world, the seas, and the rivers; and to this he pointed as he spoke of several countries between the Ionian Sea and Susa. As this was 500 years before the birth of our Saviour, it is evident that at a very early period the art of engraving on metal plates was known among the Greeks. Specimens of the engravings of Egypt have been found in the coffins or chests containing mummies; and many of those now in the British Museum consist of hieroglyphics engraved on metal, and evidently wrought with the lozenge-shaped graver and the scooper similar to, if not precisely identical with, the tools used in the present day.

When we think that the art of engraving was practised so early in the world's history, and that some of the oldest of the metal plates are even now capable of giving clear impressions on paper when the lines on them are inked, we cannot help wondering that the ancients did not go a step further, and hit on some plan of multiplying these designs by printing. It is, indeed, not easy to imagine how they failed to make the attempt, until we remember that many of the discoveries and in-

ventions which have been of the utmost benefit are those which appear the simplest when once they are brought into general use. We all know to what perfection the art of engraving pictures on steel and copper plates has been brought during the present century, and at a time when wood-engraving was comparatively neglected. One picture from a steel or copper plate at the commencement of a book very materially increased its value; and for finely finished landscapes, portraits, and work where minute perfection of finish and delicacy of tone are required, the metal-plate engraving is still pre-eminent; while "woodcuts" are more distinguished for free and bold effects, and vigorous, even though they may be rude, outlines.

The two arts, as far as regards their application to what we call printing is concerned, seem to have come into use at about the same period. We mentioned, when speaking of wood engraving, that the earliest print from a wood block, with a date attached to it, was that of the St. Christopher, dated 1423. There is no known impression from an engraved metal plate earlier than 1461, and the use of these plates for printing impressions of pictures engraved on them, after having remained undiscovered for ages, is said to have been suggested accidentally to Tommaso Fineguerra, a Florentine goldsmith, in 1460.

It is easy enough to understand how a very ordinary accident may have led to this important use of engraving, when we learn that at that period the Italian goldsmiths were many of them workers in what is called *niello*, or engravings on silver plates, in which the lines of the design were afterwards filled with some black composition. That art is of itself so suggestive of inking the lines for the purpose of taking impressions, that it is hardly necessary to suppose any accident in the case. However this may have been, when once the new process was introduced, it was taken up by most of the great engravers of the age; and the first book printed at Rome, which was an edition of the geography of Ptolemæus, was illustrated by twenty-seven maps printed from the first plate engravings made for such a purpose, the work of two Germans, named Sweynheyn and Buckink. This work, which was commenced in 1472, bears the date of 1478, so that it appears to have been long before it was completed, and, no doubt, the early engravers were slowly laborious, and took plenty of time to their work. In Germany, Italy, Holland, and Flanders, artists took up the art of plate engraving with avidity, and soon carried it to a degree of perfection which could scarcely have been contemplated by its first introducers. Among the foremost of those who became famous, was Albert Dürer, by whom the whole practice of engraving on wood and metal was so

vastly improved that his works far exceeded those of most of his contemporaries, and are now regarded with the utmost admiration. As well as having carried on the process of engraving, this able man is said to have invented that method of engraving called etching; and three of his specimens of this kind of work are dated respectively, 1515, 1516, and 1518.

Most of the plate engraving now in use is the result of what is called "etching," as well as of the work of the graving tools. Etching is a process by which the lines drawn upon the metal plate are eaten out by the application of what is called *aquafortis*, or diluted nitric acid, which corrodes those portions of the metal on which it is poured and eats it away. In order to prepare a plate of steel or copper for etching, it is necessary to have it perfectly smooth and burnished, and next to cover it with what is called an etching ground. This is a composition made of wax, asphaltum, gum-mastic, and resin, melted over a fire and applied to the surface of the plate by means of a dabber, while the plate itself is kept warm over a charcoal fire or a clear flame. The materials of which the "ground" is made will resist the action of the aquafortis, so that only that portion of the metal plate from which this composition is removed by the graver will be exposed to corrosion. When the etching ground has been laid in a smooth thin stratum on the surface of the plate, the design, which has been drawn on paper with a black lead pencil, is placed face downwards upon it, and the whole is then passed under a rolling press, which transfers the design faintly to the ground. After this the design is as it were cut in the ground by what are called etching-needles, which remove the composition from the surface of the plate wherever they press, and therefore leave the metal exposed to the action of the acid in all the parts where the engraving is required; the fainter and more delicate portions being left that they may be executed with the graver only. If any mistake is made, or any accidental scratches are made on the ground, the defects are "stopped out" by the application of a mixture of lamp black and Venice turpentine, which will keep the acid from acting on the metal, even though it is only laid on thinly with a camel's-hair pencil. The next process is to enclose the work with a rim or border of wax about half-an-inch high, and bent in the form of a spout at one corner, so that the aquafortis may easily be poured off. The acid is then poured on to the plate, so that it covers the whole surface where the design is traced on the ground. It remains on the plate until the fainter parts of the design are corroded sufficiently deep, when it is poured off. The plate is washed with water, and those parts are stopped out with the

lamp black and turpentine, so that the acid will no longer affect them, though it has to be replaced in order to complete the corrosion of the lines that are required to be deeper and more distinct. According to the extent of light and shade or perspective of the work, this process has to be repeated until every part of the design is burnt or corroded by the acid. The plate is then warmed in order to remove the "ground," after which it is oiled and thoroughly cleaned for the next process of engraving.

The principal instrument is the graver, which is called the *burin*, and is generally of a lozenge shape for the fine lines, and square for the broader and firmer ones. It is fitted into a short handle, and in using it the operator (who has the plate before him on a sand-bag, placed on his bench) pushes it forward in the direction of the line required, guiding it with his forefinger, and holding it by the handle at an angle very slightly inclined to the surface of the plate. The metal is of course thrown up as the graver ploughs along the line, and this burr of steel or copper has to be scraped off by another instrument called the scraper, while the surface is smoothed by a rubber, which is simply a roll of cloth dipped in oil. To polish the plate as well as to remove any accidental scratches, a burnisher is used, and should any part of the work have been too deep, the burnisher remedies that defect also. Etching-points or needles are, as their name implies, tools like needles, fixed into handles four or five inches in length; and the dry needle is so called because it is used for those fine lines which have not been first corroded by the aquafortis. It is time, however, that we said something about a kind of engraving which, while it is of great antiquity, is one of the most beautiful in its application, and is now termed "Die-sinking." Strangely enough, although the old engravers of gems and metals never seemed to think of taking impressions of their works in the shape of *pictures* on some light and soft substance, of the nature of paper, they acquired the art of stamping their designs on hard materials, and particularly on pieces of metal, which were used to represent certain values, and so gave rise to the system of coins, and of what is now called money. It seems that in very early ages pieces of leather were stamped in this way, and were used for the same purpose as the metal coins of a later date, the simple method of making which may be briefly described, since we have already learned something about it in talking about the manufacture of moveable metal types, and engraving on copper and steel. The date of the first production of dies from which coins were impressed, is unknown; but it was undoubtedly a very early one, and even now the operation, which consisted of impressing the metal by

means of a punch struck by a hammer, is still employed in those parts of the world where the people are least advanced in mechanical arts. The great antiquity of coins still in existence, is sufficient evidence of the remote date when this kind of engraving or die-sinking was first practised. There is still in existence a gold coin, said to have been dug up in India, near the royal palace of Mysore. It was found among the treasures of Tippoo Sultan, and the Hindoos declared it to be 4,000 years old, and regarded it with superstitious homage. The first Greek coins are said by historians to have been struck at Ægina, by Pheidon, king of Argos, about eight centuries before the Christian era. It was in the reign of the Emperor Augustus that a mint for the production of the national coins was first established at Rome on a magnificent scale, although the manufacture of coins by various nations was carried on from a very remote antiquity.

The art of die-sinking is, as we have said, so similar to that of engraving, that only a brief description of the process is necessary. The piece of steel which is to form the stamp, is prepared by being brought to a soft state by the action of heat before it is used by the engraver, who, by the use of small hardened steel tools, cuts away the metal in the place where he makes his design, until the piece of steel is in fact a metal seal. This steel has then to be hardened before it can be used as a die, and is then called the *matrix* or mould. In the early days of engraving, this mould would probably have been used for stamping the coins or medals ; but as our designs are now elaborate, and the preparation and engraving of a good die is an expensive process, it is only used for making impressions on a block of softened steel, which takes the pattern of the die, just as sealing-wax takes the stamp of a seal. This second piece of steel is called the puncheon, and when it is retouched with the graver, and thoroughly hardened, fresh dies can be struck from it, so that the first engraving is sufficient for a large number of moulds, all of which are exactly like the original. The coins or medals are struck by means of a stamping-press, and the number of blows required generally depends upon the depth of the impression that has to be produced in relief.

Of course, before the introduction of machinery, the process of stamping was rude enough. When a coin or medal was required, the die for one side of it was fixed in a wooden block, on which the piece of metal which was to receive the impression was placed. The other die—for the reverse side of the coin—was simply held in the hand, and used as a punch, which by repeated blows of the hammer forced its impression into the metal, and at the same time forced the metal itself into the

lower mould. It was not until the power of the screw was applied to forcing the metal into the matrix, that any improvement took place, and this was first brought into use in this country in 1561, and was adopted as the sole means of coining in 1662. Up to that time the money was not quite round, and the edges of the coin were rough and unfinished, so that it was an easy thing to clip pieces from them, and in that way diminish their value. When the mill and screw were introduced, however, the workmen at the Mint were able to put a mark all round the edge of each coin, in order to preserve it from the clippers. Afterwards, in the case of large pieces of money, a legend or inscription was impressed on the edge itself, as may be seen in some of the coins of Oliver Cromwell; and at last marks were made on the edges, as we see them on the money now in use—an operation which is still called by its old name of "milling." Various improvements have been made in the method of striking the impressions for making coins; and as much of the money used in some of the less civilized places of the world is made in England—principally in a large mint, or medal-manufactory, at Birmingham,—the application of steam machinery has been brought to very great perfection in the process. In fact, after the die has once been engraved, all the other operations may be said to be effected by mechanical means, and coins are struck with amazing rapidity, the metal being carried to the dies, and the impression, even of deep engraving, being performed by a skilful application of levers, screws, and hammers.

Any description of die-sinking would scarcely be complete without some reference to *numismatics*, or the study of coins and medals; but this is a very interesting and very extensive science, the pursuit of which should combine an accurate knowledge of history as well as much antiquarian lore. There are, however, ample opportunities for the young student to examine the collections of ancient coins in our various museums; and it is neither very difficult nor very expensive to collect as many Roman or British coins as would fill a small cabinet. The museum of the Guildhall library contains a collection of coins and medals of a very interesting character, particularly of those medals which were at one period issued by shopkeepers as a kind of advertisement, and called tradesmen's tokens. The distinction between national coins and national medals is that, while the former represent the recognized currency, or money value used in the State, the latter are issued to commemorate some important public event, and are in that respect of very great historical value, as well as being interesting objects, as illustrating the progress in art of the period to which they refer.

The Nohak-Burner.

By JAMES GREENWOOD.

CHAPTER VII.

THE SACRED FIRE-POT WEEPS RED TEARS. ARRI WINNIKEEP DESTROYS IT, AND FORGES A NEW POT.

ARRI WINNIKEEP had little time for binding the sacred pot in the manner his cunning suggested, for the horn-blowing was renewed, and that so imperatively, as to leave no doubt as to something more than ordinary being amiss. So it proved. The summons came from the hut of a poor boat-maker, who just before had made a slip with the adze he was working with, inflicting a broad and deep wound in his thigh. There was the poor fellow lying on his back, deadly pale, and his wife and little children crying about him.

"Tell us, O kind priest," cried the woman, as Arri Winnikeep entered the hut, "are the gods of Nohak *very* angry with my poor man? Will they not accept such sacrifice as it is in our power to offer, and be appeased?"

But the impostor knew no more about surgery than of the mysteries of the sacred office he had usurped. It was an ugly-looking wound he could see; still, it was in a fleshy part, and might, for all he knew, heal easily and quickly. So he replied evasively, but in the kindest tone—

"Thou art so very poor that I am loth to confer with thee as to sacrifice; wait a little. To-morrow I will tell thee what the gods of Nohak require of thy husband."

But, breaking the silence that ensued on this speech, there was heard a gentle hissing sound, as when water is sprinkled on heated

iron. They all heard it, even the sick man, who languidly opened his eyes. From whence could it proceed? The only heated thing within the hut was the sacred pot of the Nohak priest, and towards this all eyes were directed. No one so eagerly as Arri Winnikeep, however. Hastily catching it up, he discovered that the leaves bound about it were sopped through red, and as he raised it a single great spot of blood fell with a sound to the floor.

Had it been the sole vital drop that had fallen from the miserable young man's heart, he could scarcely have looked more ghastly as, stumbling forward, he endeavoured to cover the fatal stain with his foot. But he was not quick enough. The wife of the sick man had seen it, and making no doubt that it portended death for her husband, she began to cry aloud, and beat her breast, and make a noise that might be heard half through the town.

"See! see!" she wailed, pointing to the fire-pot. "It is a Nohak sign; alas, for my poor man! It is as plain what his fate shall be as though the gods of Nohak had spoken it out of their mouths. Ah woe! woe! will nothing but his life's blood quench the fire lighted against my husband!"

Now, although Arri Winnikeep was glad beyond expression to hear the woman so simply interpret the marvel she had seen, he was not restored to an easy condition of mind by a very long way. Regarding it as a miraculous token, the woman would certainly talk of it among her neighbours, and this would be the very worst that she could do, since by that means public curiosity would be excited, and all eyes directed towards the sacred pot. This must be avoided at all hazards: so, turning to the woman in a severe tone, he bade her be quiet.

"May I not make moan when my old man is cast for death?" asked she, desperately. "If that is an offence to the gods of Nohak, let them make the pot bleed for me also, and I will die with him."

"Thou art no better than a fool, woman," replied Arri Winnikeep, sternly. "Is thy husband's life of such importance, think you, that the mighty god of Nohak should deal so with him?"

"What may I believe, if not my eyes, good priest?"

"Thine eyes are dim with sorrow, and see what is not; if it were not so I need not explain. It is not that the sacred pot bleeds—such a calamity would indeed be ruinous—it is that the blood from thy husband's wound hath defiled the vessel of the gods. What thinkest thou the people will say when they learn what has happened through thy neglect?"

Hearing this artful speech, the woman was struck dumb with terror,

while her husband, who before lay faint and quiet, was roused to speech, and exclaimed—

"Oh! woman, what hast thou done? I had better have died on the beach than been carried here. The people, when they hear of thy monstrous sin, will surround our hut, and fire it over our heads. They will spear me as I lie here helpless!"

Then the woman found her voice. First turning out the children, who fortunately were too little to understand what had occurred, she threw herself at the priest's feet, and implored him to give them his aid.

"How may I help thee? It is enough for me to excuse myself in the eyes of the gods for this desecration of their sacred fire-pot," said he, turning away. But the woman continued so to implore him, and the injured man added his entreaty so piteously, that at last the impostor affected to be melted.

"It were no more than thy deservings," said he, "if thou wert left to bear the full penalty of thy sin; nevertheless I am inclined to believe that it was accident in great part, and it is in my heart to save thee. Say no word, therefore, about what has happened, and I will at once retire to the forest and pray the Nohak gods away from their anger; but if thou breathest but a single word of thy misdoing to even thy closest friend, then will my prayers prove unavailing, and you must suffer as the gods will."

And very gratefully the deluded old woman and her husband thanked him, and solemly promised to do just as he desired.

And Arri Winnikeep did just as he promised, as far as returning at once to his hut in the forest went; but nothing was farther from his thoughts than praying for himself, or any one else. He was in much fitter humour for cursing than praying—for cursing himself that he had been so foolish as to discredit the powers of Nohak so entirely. He had begun by laughing at the sacred fire-pot and its contents (nay, the first night, to show his contempt for it, he had not troubled, when he got home, to make another fire, but cooked his fish by the sacred one); then he had been brought to regard it seriously; and now, instead of feeling convinced that the Nohak-fire was nothing but an imposture and a sham, at best he could only *hope* that it was.

If not, what a terrible thing had he done! This was the thought that haunted him as he hastened from the boat-maker's house; and it haunted him none the less when he was shut all alone in his silent hut with the vengeful thing. For the first time since he had committed the cruel deed he bitterly bemoaned his father's murder, and with his face to

the earth, cried aloud. But there was much more of the sorrow springing from disappointment than remorse stirring him; and all the while he lay lamenting, it was without despair. Presently he grew more composed; and, drying his tears, endeavoured to conjure to his mind some plan that might assist him out of his dilemma.

Whatever was to be done must be done quickly, for it was evident that the dreadful spot of red was spreading. The bigger it got the faster it grew, and in proportion the fire within it grew more and more feeble, and it was impossible to say how few days would elapse before the dry parts of the pot were eaten up by the terrible moisture and the fire extinguished entirely. But his schemes for curing the difficulty were one after an other rejected as fast almost as they presented themselves. "No! no! no!" cried he, "not that way; if there is no other, I am no better than a dead man."

And echoing his words in a soft, muffled whisper, as it were, a small voice repeated after him, slowly and deliberately—"No! no! no!"

Soft as was the sound there was no mistaking it for a trick of the imagination, and with a startled look Arri Winnikeep looked about him. He had not long to search. Naturally, the first object on which his fearful gaze fell was the sacred pot hanging on its accustomed peg against the wall, and then he discovered that the sound he had taken to be a little voice, crying, "No! no! no!" was occasioned by a regular pit-pat of red drops oozing through the leaves that still swathed the vessel, and falling on the dried grass with which the floor of the hut was strewn.

This was the whispered voice, the voice of the murdered Nohak priest growing hourly stronger and stronger, and calling for vengeance! It was impossible for the guilty man to regard it in any other light, and the conviction sickened him with fright and rage. Leaping to his feet, he sprang at the sacred pot, as though it had been a living enemy, and tearing it away from its fastening, dashed it to the ground with the few feeble embers in it, and stamped on it, and smashed it, and ground its pieces into the earth under his heels, all the while uttering the maddest cries and curses against it.

But scarce was the last spark of the sacred fire that was spilled out of the pot extinguished, when his ire cooled, and he was fit to beat his head against the wall for the foolish thing he had done. He might just as well as have beaten the pot to pieces. While it remained whole there was still a chance that its mysterious ailing might be remedied, but now every vestige of hope was thrown away, and his life was worth

no longer reckoning than the few hours that might elapse ere a Nohak horn summoned him, and he was unable to respond! And in his despair he collected the wrecks of the pot, and examined them, with a view to mending them together again, and it was while so engaged that an idea came into his head that caused him to utter a great sigh of relief, and to raise his head hopefully.

This was the idea—if he could not mend the pitiless pot, might he not take the pattern of it, and mould another out of clay precisely like it? To be sure the task was not an easy one. There was clay enough to be had, but the fashion and pattern of the broken fire-pot was very ancient and peculiar, and not readily imitated under favourable circumstances, whereas the case as it stood was surrounded by unfavourable circumstances. In his mad rage he had broken the vessel so that a considerable portion of it was ground to such small atoms it was impossible to place them in proper order; and, again, he was bound to complete the job, mould the pot, and make it and bake it by the dim light of his fire, and all before the morning. Still, it was his only chance; so, getting some clay, he closed and carefully fastened his door against intruders, and set about the business at once.

He was one of those handy fellows to whom no job comes amiss if the heart is set on it, and surely Arri Winnikeep's heart was set on this job, and not only his heart, but his head—his whole life, in fact. Relying partly on his memory, and more on such idea as he could derive from the crazy bits of the sacred pot's old shape and pattern, he contrived, in the course of a few hours, to make one something like, and then he baked it in the fire till it was firm and hard. Had any one suspected the cheat, but a slight examination of the vessel would have confirmed them, for the old pot was carved by a skilful carver, and this one merely moulded. However, it was very well, considering, and when it was well coated with grease and brown earth, a casual observer would not have known it from the original.

Arri Winnikeep was delighted with the result of his ingenuity. "After all," said he, "so far from being a misfortune, it was downright lucky that I broke the malicious old pot: it certainly would have betrayed me and brought me into trouble had I continued to trust it. Now I am safe. This is *my* fire-pot, and I may defy all the Nohak powers that may be brought against it. It is innocent of blood, as the simplest clay pot in the town—there is not a flaw of the hateful colour about it, and where there is no seed there can be no plant. As for this wretched old tell-tale, I will provide against that working me further mischief. Nobody shall ever find enough of it to swear by. I will take

each separate piece of it, and bury it in the ground, and some of the pieces I will throw into the sea. I will do so at once, and then there will be no mistake.

So he did. He collected all the fragments of the broken fire-pot. and carried them out, and buried each little piece wide apart from the other. There were twenty-three pieces in all, and some he buried in the forest, and some in the town. His seeming success made him insolent. He took a piece, a red piece, and carried it to the green already spoken of, where the marriages and the marriage-feasts were consummated, and digging a hole in the middle of the green, buried the piece. "This will serve the foolish creatures right," he said to himself, with a grin. "In future, at their ridiculous marriages, all the while they are invoking the blessing of Nohak, they will be treading on part of its sacred emblem. But I must not be too hard against Nohak. Perhaps, in its power, it may cause the old priest to sprout up out of this bit of clay moistened with his blood!"

But this he only said in derision.

CHAPTER VIII.

THE CRIMSON SPOTS IN THE GRASS. NOA KIRI MAKES STARTLING DISCOVERIES.

AFTER this, matters progressed famously with the daring Nohak cheat. Just as he thought that it would the false fire burnt as freely in the false pot as ever it had done in the true, and he went about his business steadily and quietly, giving general satisfaction. Nobody suspected him in the least, while as for the old couple who had been so nearly frightened out of their wits by the token of the blood drop, they were quite safe, for the boat-maker had died of the wound in his leg, and his widow, finding after all that she would rather live than die, kept the secret close, never again so much as mentioning that strange affair even to Arri Winnikeep himself. Day after day flew by and the time was rapidly approaching when the impostor was to reap his great reward.

But he deceived himself sadly when he imagined that the terrible gods of Nohak were to be outwitted by a miserable creature such as he was. His doom was sealed, and Noa Kiri, Kiri Moa's eldest brother,

was fixed on by the gods as the instrument by which the double murderer should be brought to justice.

This young man, for though the eldest of the three brothers he was scarcely thirty years old, had from the very first viewed with great suspicion the elevation of Arri Winnikeep to the high position of Nohak keeper. Not, indeed, that he suspected the true state of the case; *that* was of too dreadful a nature for any true Tannese to think possible. Besides, setting this aside, Noa Kiri knew the blacksmith's son very well, and had never observed in his behaviour anything ferocious or blood-thirsty; indeed, he appeared to be the very last man likely to do a bold murder. No; what Noa Kiri supposed was, that Arri Winnikeep had by bribes or other means induced some very powerful Samoan god to set aside the power of the Tannese deity of Nohak and instal him in the place of keeper, spiriting away the old priest to make room for him. On this account, Kiri Noa was miserable on account of his sister, and, as the time drew near when she was to be given in marriage to Arri Winnikeep, he grew more and more melancholy, and deserted his companions that he might wander in solitary places and express his regret unseen.

It was while in this mood one day that he strolled to the depths of the forest, and all unexpected he made a curious discovery. A prey to miserable dejection he was seated on an uprooted tree with his eyes fixed on the ground, when gradually the spot on which he gazed seemed to change colour, from green to brown and from brown to vivid red; and as he looked wonderingly, the spot, which at first was no larger than a man's hand, spread larger and larger till it was a foot in width at least. So strange a phenomenon was likelier to be born out of a man's imagination than be real, and half suspecting it to be so, Noa Kiri closed his eyes for a moment and opened them; but there was still the red patch beyond doubt. Full of amazement he began stirring the red grass with his spear which he had with him, and presently the point of the weapon struck against something. It was not a particularly hard substance that the spear struck against, neither was the blow a hard one, but as it happened, Noa Kiri experienced a sudden benumbing pain from his finger tips to his shoulder, of so violent a nature as to compel him to let go the weapon, and then as it lay along the grass he saw that a something was transfixed at the end of it. It was jagged and thin and brittle-looking, and being, as well, a little hollow in its shape, Noa Kiri took it to be a bit of a human skull.

"It is a piece of the skull of some powerful enemy of mine," said he; "that is why I felt such pain in my arm when I pricked it up."

But when he came to examine it more particularly he discovered that it was not bone, but pottery—some scrap of a fractured clay vessel; and still as he examined it he uttered a cry of terror, and sinking down to the earth laid his face there and began to pray aloud and vehemently.

And no wonder. As before mentioned the fashion of the true Nohak pot—that which the murderer, Arri Winnikeep, had destroyed—was of a very peculiar pattern, and presently it was revealed to Noa Kiri that what the end of his spear had fished up was a piece of that sacred vessel.

Never in his life—in time of eclipse, in time of battle, at the time even when the great Nohak fire burnt all night—had Noa Kiri been so much afraid. His first impulse, as soon as he had recovered somewhat of his astonishment, was to flee; but this an invisible power seemed to prevent, while at the same time it invited him to take up the fragment of reddened pottery. For a long time he hesitated, not forgetting the mysterious pain it had just now caused him; but the invisible power would take no denial: so he tremblingly took it between two leaves and disengaged it from the spear point, and, wrapping it up, placed it reverently within the folds of his girdle.

Then he hurried away from the terrible spot, though without any other aim than that of getting away from it, for he was much bewildered as to what he ought to do. That there was some grave mystery about the entire business he had no doubt, and that Arri Winnikeep was at the bottom of it was the suspicion that each moment grew stronger in the young warrior's breast. Again and again he took out the scrap of dirty and stained crockery, and examined it, until he had settled beyond question that it was a bit of the true fire-pot, and nothing else: but he was afraid to let his thoughts go beyond this. It seemed impossible to his religious mind that any mortal could be guilty of the unspeakable wickedness of forging the sacred vessel. And if he—the son of the old spear-maker, that is—had done so monstrous a thing, what had induced him? Where was the old Nohak priest?

Should he go straight to the king and make known the discovery he had made, with the peculiar circumstances attending it? It seemed the most straightforward and proper course to pursue; but what action could be taken on evidence so slight? Confident as he himself was that what he had found was a piece of the sacred Nohak pot, would the fact be equally clear to all to whom it might be shown? It was dangerous at all times to accuse great personages, and supposing Arri Winnikeep to be so vilely guilty as he suspected him to be, he would without doubt be unscrupulous as well. What if he turned round and

accused him—Noa Kiri—of manufacturing this bit of evidence for the sake of setting aside the contract of marriage between the priest and his sister, and which the king and every one else knew he entered on with ill grace and discontent?

Filled with these distracting thoughts he wandered aimlessly to and fro, when, presently, to his increased wonder and amazement, he spied a second red path in the turf. For a moment he thought that he had wandered back to the place where he had just before made the startling discovery, but a moment's consideration convinced him that this could not be the case, for when he turned up the tufts of grass with his spear he had not replaced them, and all about this second red patch the grass was level and unbroken.

Without hesitation, and still influenced by the invisible power, Noa Kiri began to dig again, and in a very little while found what he sought—another bit of the sacred pot, soddened red like the first, and somewhat larger, and when he compared the two pieces and placed their edges together, they fitted.

This time Noa Kiri's amazement was less than his awe. It was evident that mere accident alone was not responsible for these marvellous revelations. Here were two red patches and two bits of the sacred pot, might there not be more for the seeking? As he thought this he rose up with the air of a man whose purpose was settled, and, wrapping both bits of red pottery together, and placing them in his girdle, plunged deeper into the forest, his eyes diligently scanning the ground.

CHAPTER IX.

IN WHICH THE SEA GIVES UP ITS PORTION OF ARRI WINNIKEEP'S SECRET.

HIS searching was successful, even beyond his most sanguine expectations. Before nightfall he had discovered and turned to profit fifteen red patches in the grass, so that he was compelled to make a bag of his rat-skin cap to carry the collected scraps of pottery in. As he found them he placed the bits together with a view to matching them, and, though they did not make up its perfect shape, they sufficiently revealed it to place beyond a doubt what it was.

It was now so dark that had further red patches appeared in the grass

he could not have perceived them, and only that he was afraid of drawing attention towards him, he would have made a torch out of the twigs of the pitch-tree and continued his search; as it was, he resolved to postpone further exploration till the morning. Next day, from sunrise to sunset, he renewed and continued his search, and found nothing; and the day following his luck was no better, although he never ceased his endeavours that he might eat: in those two days all his refreshment was a drink of water.

It wanted now but two days to the full of the moon, when the Nohak priest might fairly demand his sister in marriage, and according to his promise he must yield her. Noa Kiri was in despair. Much as he had before objected to the match, now he regarded it with twenty times more loathing. In his own mind he was well convinced of Arri Winnikeep's villainy, and had no doubt that the evidence to that effect already in his possession was enough for his purpose; but the same mysterious influence hat had guided his steps since the moment when he discovered the first ed patch in the grass seemed to forbid his taking any measure at present for the false priest's undoing.

There still remained undiscovered a quarter of the sacred fire-pot, and where to look for it poor Noa Kiri had not the least idea. Over and over again he retraced his steps, and carefully redug at every red patch that had already yielded him treasure, in hopes that two pieces might have been there buried, but his toil was without reward. He even ventured into the Nohak priest's hut when he was away (he would not have dared do such a rash thing, only that, convinced that Arri Winnikeep was an impostor, he had not the least fear of him) and searched there, but with no better success.

Another day passed, and the evening of it found Noa Kiri no better at ease than the preceding. Not another scrap of the red pottery was to be found, and when the moon rose on this evening it shone on him a man more miserable and sick at heart than any other in Tanna. The moon that reminded him of the rapidly approaching triumph of his enemy. It was a moon of great size and splendour, and was but one night short of full growth. "Arri Winnikeep is watching the moon at this very moment," mused the young man, "and comforting himself with the reflection that it and his joy will be full ripe together; and he is right for all I can do to balk him. What am I to do?" And, filled with these melancholy thoughts, he turned his face from the forest, and wandered down to the sea beach, hoping that a quiet walk there, listening to the soft lapping of the waves, might soothe him. He was not mistaken. It was impossible for any man to contemplate that calm

great water, contrasting it in his mind with its rough turbulence of yesterday, without reflecting on his own present trouble, and the peace in store for him if he only obeyed the ruling of the gods as the sea did. When he grew tired of walking he climbed the summit of the heap of stones, from which the swimmers dived, and there sat down.

The moon was very bright, and the surface of the sea sparkling as silver. Noa Kiri had never before seen it so wholly bright and so clear close in by the shore. He could quite distinctly see the bottom twenty yards from his perch, where the water was at least a fathom in depth. He could see fish of various kinds there disporting, and other fish that lived in shells of quaint shape, crawling over and under pebbles of yellow and black, and green: the bright moon showing all.

Presently, as Noa Kiri fixed his eyes on the water, or rather on two of the pebbles before mentioned that lay at the bottom, they seemed to grow buoyant, and rise to the surface as though they were sponges and not stones. Their colour was yellow as he at first saw them, but in course of coming up the yellow deepened and became an orange—a deep orange, and finally a vivid red. It was not, however, until they had quite reached the surface that the two stones, or whatever they were, attained the vivid red colour, and there they remained slowly gyrating until they made two tiny whirlpools, just of the size and of the terrible colour of the terrible patches the young warrior had discovered on seventeen distinct occasions staining the green grass.

Noa Kiri was not startled, he was only dreamily amazed, which no doubt arose in great measure from his being so tired, poor fellow! Besides, to his sleepy mind the phenomenon was not unaccountable. He knew that if the eyes are fixed steadily on a bright light, the light will gradually fade, and be lost in lurid colour—purple, or red, or violet, as the case may be. So he closed his eyes for fully half a minute, and opened them again to see the tiny eddies slowly sinking to the bottom again, the red colour fading out of them as they sank; but soon as Noa Kiri fixed his gaze on the two patches—that kept together with as little space between them as two eyes, as one may say—they appeared again to gain courage, and to rise upwards again; and then he saw that the two things were not pebbles, but ragged scraps of potsherd. Brighter than moonlight, swifter than lightning, did the truth flash to the young man's mind, and he sprang to his feet. As he did so, however, the two floating objects became stones again, and sank rapidly to the bottom. But Noa Kiri had seen enough. With a brief prayer to the god of Nohak to protect him—for there were sharks in these waters—he joined his hands and made the plunge, and in less than

a minute he was again climbing the diving-pile, panting and blown, but with an exultant face, for he had recovered two other pieces of the sacred fire-pot.

Once more was his voice raised in cheerful thankfulness, instead of humble supplication, to the powers of Nohak ; and when he looked on the sea again he beheld three more red stones struggling up in the water, as though attracted by his longing eyes. Once more he dived, and then, soon rising, he had but one hand free to swim with, the other being richly laden. Three other portions of the sacred pot were recovered, ruddy and red as blood itself, although the sea had washed them, and the shingle of the beach had rubbed and scrubbed them so long.

With a cry of triumph Noa Kiri sprang to the shore, making quite sure that now the scattered pieces of the pot were all collected, and that all that remained was to stick them together. But he was mistaken. Anticipating the recovery of all the bits, he had two days since procured some gum of a tenacious sort ; and now, sitting down on the diving-heap, he busied himself at his job of pot-building. To his great disappointment, however, he was one bit short—a bit about two inches square, and fitting into the bottom of the restored vessel.

"There must be a bit yet remaining in the sea," thought Noa Kiri, and he looked from his perch eagerly in hopes of seeing another red patch in the water.

But he looked in vain. As far as he could see, the surface of the sea was clear and spotless, and he walked to and fro along the beach a mile or more, anxiously looking out, but with no better result. It was very unfortunate, but there was no help for it. There was one consolation, however : there could be no denying that what he had recovered *was* the original sacred pot of Nohak ; and having finished his task so far as he was able, he first gave thanks to the gods of Nohak for such unmistakable manifestations of their favour, and then he retired to the wood, carrying his treasure with him, and lay down to sleep till morning.

So very uneasy was Noa Kiri through his long and anxious searching, that he woke not, as was his custom, with the rising sun, but slept on for several hours later. It is doubtful if he would have awoke even when he did had not certain unusual sounds disturbed him. Somehow the said sounds were of a kind with others that he had heard in his dreams, and when he started to his feet and rubbed his eyes he could scarcely make out but that he was dreaming still. But in a very few moments he was convinced of the reality of the sounds that he heard. It was the

music of the drum and flute, and the high-pitched notes of the reed pipes, betokening what he had been dreaming of—his sister's marriage.

"I must be stirring," he muttered grimly, as he hastened to take up his treasure; "it behoves not a man to lie late abed on the morning when his sister takes a husband. I shall be late for the feast unless I hurry!"

So he concealed the restored Nohak pot beneath the folds of his cloak, and made haste towards the town.

As before mentioned, the marriage green was situated in the centre of the town, which, as Noa Kiri approached, seemed empty and deserted, for old and young had flocked to the green to see the ceremony and partake of the good things to follow—the roast pig, and the yams, and the palm wine that the Nohak bridegroom had bountifully provided. Such a marriage as it was to be had not occurred since the king himself had espoused his chief wife. His majesty on this occasion had vouchsafed his royal presence, and came prepared with a present of a beautiful pair of copper wristlets, so brilliant that the face might be seen in them, for the lovely Kiri Moa.

Noa Kiri was in bare time; as he neared the place he could distinguish the tall plumes of his majesty's cap in the midst of the great throng assembled, and, judging from the general bustle and pressing forward, the ceremony was about to commence. No one observed the approach of the bride's eldest brother. His coming had been long and anxiously looked out for, since it was proper that he should be present to deliver his sister into the custody of her future husband; but he came not, and at last the people grew impatient and begged of the king to let the marriage proceed, the second brother of the bride taking the place of Noa Kiri.

"Are you willing that it shall be so, Arri Winnikeep?" his majesty respectfully asked of the impostor, who, superbly though chastely attired, as became so holy a man, looked more handsome than ever before in his life.

"Rather than incommode the king and prolong the impatience of his good subjects, I am willing," answered he affably. He was more than willing. From the first he had been aware of the enmity of Noa Kiri, and was oppressed with a dread lest he should by some means succeed in balking him of his great prize; and his uneasiness increased when he heard that during the last three days, Noa Kiri had been neither seen nor heard of. Not that he was desirous of his company; indeed, he would have given something handsome for the assurance that it was as the second brother hinted: "Noa Kiri is gone away till all is

over, not being in good humour for feasting and rejoicing." So it happened that Noa Kiri was allowed to join the mob unnoticed.

"Is all in readiness?" asked the king, as the bride and bridegroom were placed before him.

"All!" shouted the people eagerly sniffing the baked meats.

"Then," began the king, holding aloft the cup of water, the drinking of which together, was to constitute the Nohak priest and Kiri Moa man and wife, "since Noa Kiri chooses to be absent, I—"

"Noa Kiri is here!" cried a loud voice, and the people, looking about in amazement, at once recognized who had spoken. Making way for him, he approached the king whom he saluted, but who received him coldly.

"It were a pity that thou shouldst interrupt us since it has pleased thee to stay away so long," said his majesty.

"How much or how little I am to blame will presently appear, my king," replied Noa Kiri, with dignity.

"Haste then and take thy place," exclaimed the king, "the bride and the bridegroom are ready, as are the wedding presents."

"I am glad that the presents are not yet distributed, since I have one for my brother-in-law; indeed, it is my long searching for a present worthy so honourable a man that has caused my delay." And so saying he turned with a gesture of profound respect towards the wondering Nohak priest. The gesture was satisfactory enough, but there was something to be read in Noa Kiri's eyes as he made it, that made the cheat's heart beat apprehensively; nevertheless he retained a calm countenance.

"Nay," said he, "a further present from Noa Kiri were sheer extravagance, since in giving me his sister, he makes me richer than any man in Tanna;" and he would have kissed the fair Kiri Moa on the forehead had not her brother suddenly pressed forward and pushed him rudely aside.

That mischief was brewing—that it was already brewed and ready for his swallowing, the impostor felt an inward conviction; still, however, he put a bold face on the matter.

"Are you mad!" he exclaimed, in a low whisper, as though what he said was only intended for Noa Kiri's hearing; "are you mad, that you dare lay violent hands on the sacred keeper of the people's Nohak! Flee for your life, before they draw their knives and take instant vengeance on you!"

As the artful villain supposed, his words were not thrown away on the mob. In an instant five hundred knives were drawn from their

sheaths, and only the presence of the king saved Noa Kiri's life from being sacrificed. But it is death by the laws of Tanna to shed blood before the eyes of the king. Nevertheless they murmured angrily, "Let him die! let him die! How dare he raise his hand against the priest of Nohak!"

"This must not be," spoke the king, severely; "thou hast merited death, Noa Kiri, and shalt pay the penalty. Take him from my sight," and the king signed to the two executioners that were constantly attached to his body guard.

"Grant me but a moment, O king, that I may deliver to Arri Winnikeep the present it has cost me so much to procure," spoke Noa Kiri, nothing daunted by all the murmuring and threatening; and as he spoke he withdrew from the folds of his cloak the true Nohak fire-pot, patched and stained, but unmistakable. Bowing to the false priest, he offered it to him mockingly; but he, with a loud cry of terror, started back from it, and covered his eyes with his hands. As for the king and the people, so complete was their amazement that they had not one word to say, but stood with staring eyes and mouths agape for what was to follow.

"My brother-in-law does not appear anxious for his present," spoke Noa Kiri, mockingly. "Come, take it in thy hand, good Arri Winnikeep; what difficulty thou must have experienced in carrying the sacred fire in a pot false and forged! Here is the true fire-pot; take it, I pray you!"

But Arri Winnikeep shrank away from it as though it was red with fire instead of blood; yet even as he did so his quick eye detected the hole in the vessel's bottom.

"I thought that he was mad; I said so!" said he, appealingly, to those about him. "Poor Noa Kiri! his love for his sister who is about to leave him has turned his brain. See! he brings me a pot without a bottom to carry the sacred fire in!"

"Yes! yes! he is mad," cried the people, now finding voice, and glad of an excuse to side with the bountiful bridegroom who had provided such a splendid feast; "without doubt he is mad! Take him away, and let the marriage proceed. How can fire burn in a bottomless pot?"

And hearing how the people sided with him, the impostor took heart again, and stood upright and triumphant. But lo! at that very moment, and fair in the sight of those who were close enough to see, at the spot where he stood, and in a circle about his feet, the green of the grass began to fade and grow yellow, and then orange, and then

vivid red. Until, with their pointing fingers, the wondering people drew the impostor's attention, he was unaware of what had happened; but when he looked down and saw it, the strength of his knees forsook him, and his feet slipped on the wet red patch, and he fell flat down. Then Noa Kiri, foreseeing what would happen, began to turn away the stained grass, and presently was revealed the piece of the sacred Nohak pot that was missing, and having fitted it into his place, Noa Kiri held it aloft, and, with his foot on the murderer's throat, told the story he had to tell, amidst such silence as a falling leaf would have disturbed. When he had concluded the people shouted—

"Where is he! where is he! hold him up, that we may see him, and hear what he has to say!"

He needed holding up. Had he been a man bereft of his bones, he could not have looked more abject and limp and ghastly. He had not much to say, but too much for the provoked people. He had proceeded no further with his miserable confession than—"The pot which Noa Kiri produces is red because of the blood of your old Nohak priest, spilt on it by me," when, with furious yells, they fell on him, and ere one might twice count the full number of his fingers, he was hacked to bits, and his detestable remains trodden into the mire.

The next Nohak priest who ruled in Tanna was Noa Kiri, who had so miraculously saved the sacred pot, and there rule his descendants to this day.

Far Away in the Frozen Seas;

OR,

A STORY OF A WHALING EXPEDITION

CHAPTER IV.

ON THE TRACK.

AS the *Hope* continued her voyage, and went into one port after another, she made it everywhere a point to establish a friendly intercourse with the Esquimaux, partly for the purchase of sundry articles required, and partly in the expectation of getting tidings about Captain Griffin. For both these purposes Hans Christian's services were found most useful, as Robert had acquainted him with the object of their expedition, and he was always ready and willing to go and transact business with his countrymen and make every possible inquiry. But for him they would have had small chance of success, and as it was they only obtained sufficient information to serve as a finger-post for the course they should pursue. Some of the natives reported that they had seen a ship answering to Hans Christian's description of the *Eleanor* lying at anchor off Cape Riley when they were out hunting. She was completely blocked in by the ice, but had an abundant supply of provisions, and everything necessary on board. The crew were in good health and spirits, and only waited for the breaking up of the ice to continue their voyage. They could not positively affirm that Captain Griffin was the commander, but the description of the vessel tallied with the *Eleanor* exactly, and they said, too, she was heavily freighted with blubber and whalebone. It was about nine months previously

that they had seen her, and they could not say whether she was still lying there, as they had not for a long while been in that neighbourhood, and even at the time had only stayed a few hours, as the season was far advanced and would not admit of delay.

This was certainly anything but satisfactory intelligence. Yet it served to kindle fresh hope. Nine months back, at any rate, they knew Captain Griffin and his crew were living, and in no want of food. Perhaps, even yet the ship was lying there, and it was unanimously decided, without much deliberation, that they should steer at once for Cape Riley, as, at all events, by going thither, they would ascertain positively whether the vessel seen by the Esquimaux was really the *Eleanor* or not.

It was a long way off to Cape Riley, but Captain Becker and his companions feared neither danger nor distance. Without delay they took the straight course for it, though it was almost certain that winter would surprise them before getting there, as it was fast approaching.

The further North they went, the greater became the difficulties to encounter. Sometimes a dense fog would overspread the sea, so thick and impenetrable, that a few paces off not a single object could be discerned; and more than once the *Hope* had to force her way through huge masses of floating ice, which threatened her destruction every instant. The pressure on the ship of the immense blocks was tremendous, and but for her first-rate build she must have been crushed to pieces. The whole crew were incessantly employed in clearing away, with hooks and crowbars, the loose ice, and they had often to carry on their work amidst darkness and cold and drifting snow. But their dangers came to a climax one day when a violent storm arose, and all the packs were set in motion and began driving past the ship. At the commencement of the storm, the *Hope* was so near land that the Captain made for a little narrow cove, where he trusted they might be in safety. Three anchors were dropped, and some degree of security began to be felt on board, when all at once the packs came rushing into the cove and dashed so violently against the ship, that one of the powerful anchors gave way with a loud whizzing noise. Half a minute later, and the second was torn away; all that held the vessel now was a ten-inch cable of the best Manilla hemp. For a considerable time it stoutly resisted both the pressure of the ice and the fury of the storm; but it was drawn up as tight as a violin string, and the deep whizzing sound thus occasioned resembled the tones of some powerful Eolian harp, and could be distinctly heard above the raging storm and the rattling ropes. Suddenly a noise was heard, as if a cannon had

been let off: the last cable had snapped, and the ship was driven violently out into the sea.

It was an hour of fearful danger, but Captain Becker never for an instant lost his calm composure, and his example influenced the whole crew. Every man was cool and collected, and did his best. Once more the ship obeyed the helm, and, by the individual and united efforts of all on board, she was brought into a safer place, in spite of all the whirl and turmoil surrounding her. But they were not even then completely out of danger, for it was only next morning, after the storm had begun to subside, that they managed to get the ship quite free from the ice, and the poor fellows got time to breathe, and ventured to take a little rest after the anxiety and toil of the preceding night.

Neither Captain Becker, Lieutenant Lowell, nor Robert left the deck as long as the storm lasted, and they were even now keeping watch, while nearly all the men were sleeping. The Captain's face wore a grave, troubled look, as he gazed at the clouds and then at the sea, and he seemed oppressed with gloomy thoughts.

"It has been a fearful night," he said at length. "You know now, Robert, some of the terrors of the Arctic Seas."

"Yes!" said Robert, "and I confess they are worse than I ever imagined. More than once I thought we must go to the bottom; and so we should have done, but for your courage and skill, Captain."

"No, no, we have to thank a higher power for our deliverance; for, indeed, He has protected us in a marvellous manner," said Captain Becker, looking upwards as he spoke. "It is the question now whether we shall continue our voyage to Cape Riley, or seek out safe quarters and wait till winter is over. The plain truth is, I fear, if we go on we shall encounter far greater perils than we came through last night by God's help."

"Oh! no, Captain, you cannot be in earnest, surely," said Robert vehemently. "You would never settle quiet in some corner already! God can and will still protect us, and all winter long I should never know an hour's rest if at least we did not get to Cape Riley and find out whether the story of the Esquimaux was true. A brave heart, you know, Captain. We must not lose it now, for it involves the safety of my father."

"So be it, then; and if we perish, at least we have done our duty. But God knows you have a brave heart beating in your breast, my boy, to want to go on still, after such a night! Well, well! we'll do all in our power."

So the vessel sailed on, and contrary to the Captain's expectations,

the farther North she went, the less was the sea encumbered with ice.

The only way the Captain could account for this, was that the storm had swept it into every creek and bay along the coast.

"So much the better for us," he added. "I quite hope now, we shall reach Cape Riley in good time, and what's to be done next must depend on circumstances, and on the discoveries we may possibly make there."

The weather still continued favourable, the sky was cloudless, and the sun shone bright and clear. From the reckonings made by the Captain, it was evident they were not far from Cape Riley.

"To-morrow," he said to Robert, who was all impatience, "to-morrow I think we shall be there."

Poor Robert was so intensely excited that when night came, he could not close an eye. To be so near the spot where he hoped to find his father, or, at all events, some sure token of his being still in existence, quite chased sleep from his pillow. With the gray dawn he hastened on deck, and climbed the mast-head to look through the telescope in the direction Captain Becker had pointed out, hoping to discover the dim outline of the longed-for Cape Riley.

"Too soon, Robert," called out the Captain a little while after, as he came out of his cabin to look at the wind and weather, and noticed the impatient youth aloft. "It may be hours yet before we sail near enough the land to see the coast."

"Never mind, Captain, I'll be the first to see it, I'll take care of that, and the air is so clear to-day with no fog whatever, that we can't fail to see it ever so far off."

The Captain smiled at Robert's enthusiasm, and left him free to his meditations. The poor fellow could neither eat nor drink, but stood gazing through the telescope instead of going to his breakfast. However, the sky began to darken, and a light mist sprang up from the sea as the morning advanced. Still Robert would not quit his post, but hoped that as the sun rose higher in the heavens, the mist would disappear again. His expectation was realized, for about midday it completely rolled away, and left the horizon clear. At the same moment a joyful shout came from the mast-head, and Robert waved his cap, and exclaimed—

"Land! Captain Becker! I see the shore distinctly, and ten great piles of stones. Is that Cape Riley?"

"I think it is," replied the Captain, after gazing steadily awhile through the glass. "Yes! now I see the low white lime-stone ridge that

runs out into the sea; I remember it quite well, and behind it are the snow-covered crags where the grebe and the eider-duck make their nests in summer. Yes, it is Cape Riley, there's no doubt about it!"

This announcement excited universal interest, and every telescope on board was brought into requisition to get a sight of the coast. The wind was favourable, and each moment brought them nearer. Presently Robert, who was at his old station on the mast-head, exclaimed—

"There is a flag-staff fixed up with a cannon-ball on one of those stone heaps, the bigger of the two."

And almost immediately the flag-staff came in view of every one and heightened their excitement, for it was clear enough that the flag-staff could not long have stood in such a position, but must have been recently planted there. At last the ship came quite near the beach, and a boat was lowered, into which Captain Becker, Robert, Lieutenant Lowell, and some of the men, including Hans Christian, stepped and rowed ashore.

Robert, in his impatience, was the first to leap out of the boat and hasten to the heap of stones. The others soon followed, gazing with eager eyes in every direction; but except the signal flag-staff, which evidently could not have been put up by the Esquimaux, they found nothing very noticeable. A little further on, however, on a tongue of land, that ran out towards the west, and formed a little bay, which was sheltered from the north by steep cliffs, Captain Becker's sharp eye discovered the ruins of five distinct dwellings. On the side nearest the cliffs there were four circular heaps of crumbling limestones, surrounded by others of a larger size, as if they had been used to keep down the canvas of a tent. Two, still larger, with a space between them of about two feet, showed where the entrance had been, and sundry flat square blocks, lying about, had apparently served for hearths. A little way distant, but in the same line with the remains, there was a larger enclosure. The entrance was to the south, facing the road. It consisted simply of great stones, piled one on the top of an other. The enclosure itself was triangular, on the north side about eighteen inches high, and was made with flat stones. Some bones of birds and the side of a seal lay exactly in the middle of the triangle, and also the cover of a tin case, coated all over with rust, in which preserved meat had been. At the foot of the cross Hans discovered a piece of sail-cloth, almost rotten by exposure to the weather, and on the shore, about thirty paces distant, they found several bits of deal, about four inches long, painted black and green and white. These were evidently parts of a boat, and appeared to have been intended for firewood.

There was nothing more, and the whole party stood gazing awhile in blank silence, with gloomy looks and sorely disappointed hearts. At last Captain Becker said,—

"Well, there is not much evidence certainly, but still quite sufficient to prove beyond a doubt that some time back a ship was really lying here at anchor, for these are not the leavings of the Esquimaux. Whether or not this ship was the *Eleanor* is another question; but we must just take for granted it was till we have proof to the contrary."

"But what can we do?" asked Robert, in great distress. "There is nothing whatever to show what direction my father took when he left here."

"Our first business must be to explore the whole coast thoroughly," replied the Captain. "The more I think over it the more convinced I am that they have only made a short stay in this precise spot, and we had better separate into three companies, and see what may turn up in other directions. Let one party of us go to the right, and another to the left, along the shore, and the third keep inland. At sunset we'll all return here."

The proposal was unanimously agreed to, and acted upon immediately. The Captain and some of the sailors took the right and Lieutenant Lowell the left, and Robert and Hans went towards the interior, over a dreary flat, covered with snow and ice. Before long the report of a gun was heard from Captain Becker's side. A second followed, and a third. This was the signal arranged for the announcement of any special discovery that might be made, and Robert and Lieutenant Lowell turned about, and hastened with all speed to the place indicated by the firing.

Before they reached it they heard Captain Becker shouting, "Found! found! We've certainty now! Captain Griffin was here, and the dwellings we came upon first were just temporary makeshifts. Look here, friends, see these traces and remains!"

The first sight was a sorrowful one. Three graves were there, all amidst the dreary ice and snow and loose rolling stones. The small hillocks had been carefully made and slated with limestone, and an inscription placed on each recorded the names of the dead—Braim, Hartwell, and Torrington. There was also the date of the death on the first and third graves, January 1st and April 3rd, with this addition—"on board the *Eleanor*."

"That reads plain and distinct enough," said Captain Becker. "I knew the three sailors well that lie here, sleeping their last sleep, and fine fellows they were, and the mention of the fact that they died on

board proves that on the 3rd of April the ship must have been in good condition. That is a great comfort for you, Robert, and for us all. She cannot have been wrecked, for there is not a fragment of any sort to be discovered. There is little doubt she got safely out of the ice and continued her voyage. But let us search further; we shall come across something else, I dare say."

A little way from the graves, on the left, there were two immense stones sunk into the soft crumbling limestone, and close by a block of wood, more than a foot in diameter and eight inches high, that plainly had been used as the stand for an anvil. There could be no mistake about it; for nearer the shore, a little eastwards, there was a great black patch covered with coal ashes, iron nails, iron rings, and other things of that description, evidently the remains of a smithy. Still nearer the shore, but a little more to the south, it was equally plain, from the rubbish lying about, that a carpenter's workshop had been, and about four hundred paces distant from the graves they came upon a spot where once a small house had stood with a little garden near it. Still further on, they found a heap of preserved meat canisters, filled with stones, which most likely had been used as ballast.

Besides these glaring proofs that Captain Griffin must have made a long stay there, many other tokens were found which seemed to indicate that it had been the encamping ground for a whole winter. There were fragments of sail-cloth, old ropes, broken barrels, bits of iron, old and new wood, wearing apparel, a bed-cover, pieces of paper, a little key, brass mountings, which appeared to belong to a ship-chest, and many things else.

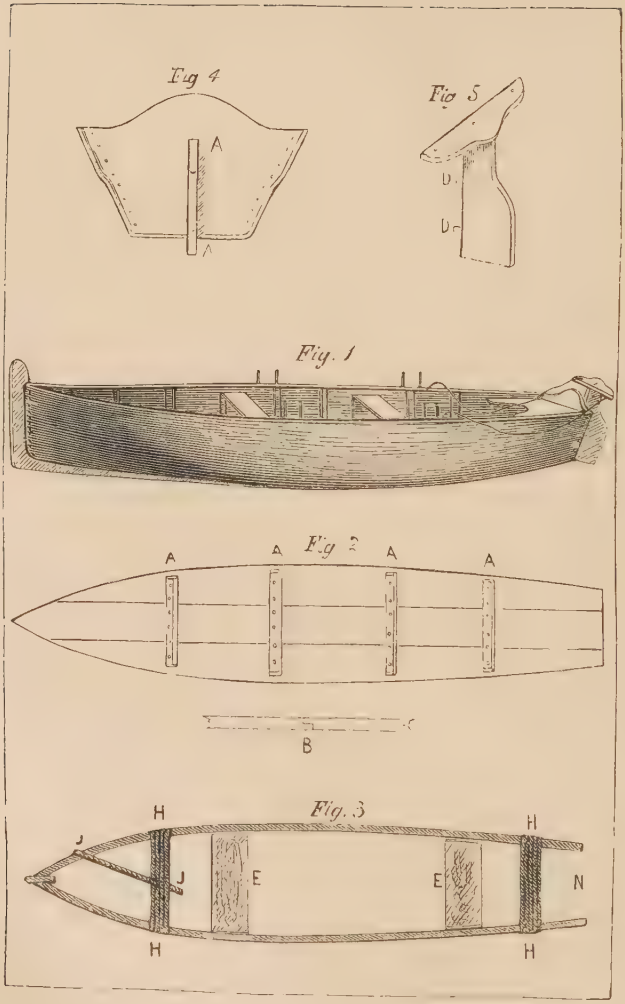
In various directions the tracks of sledges were still visible, both in the soft limestone and also on the snow-covered flats away to the north. Everywhere the place was full of signs of former habitation. It was impossible to look at the little garden without emotion, to see the moss and the anemones some careful hand had found out and planted. Whoever had done it, must have meant to take up his abode there, or to return to it some day; at all events, he had thought of the future when he laid out his garden.

The frozen bed of an old water-course still remained, which had been used by the crew of the *Eleanor* to convey the water into a washhouse. The tubs were all standing, just as if the washers had left them at a moment's notice. There was even a pair of buckskin gloves, which had been carefully laid out to dry, and stones put on them, to prevent the wind blowing them away. They had been quite forgotten in the hurry of leaving.

"Well, this much is certain," said Captain Becker, after their explorations were over, "we are on the very place where our friend Captain Griffin encamped last winter; and from the fact that only three of the crew died during the time, we may reasonably conclude that all the men were in excellent health, and that there was no scarcity of anything on board. The gloves, and sundry other signs, would seem to speak of a sudden and speedy departure. I should suppose that, owing to a warm wind or some other cause, the ice loosened round the ship, and Captain Griffin eagerly seized the opportunity, at once weighed anchor, and got out into the open sea. I can quite picture to myself the hurry they were in, how they took down houses and tents, and carried off smithy and everything just as it was. Anything of no value they left on shore, and the whole business was gone about with such despatch that one man was obliged to leave his gloves, another his bed-cover, a third his key behind him, to get on board in time. The question still remains unanswered, as to what course Captain Griffin has taken, for we have found nothing that throws the slightest light on the subject. In my opinion, our best plan is to continue our search along the coast towards the north, as there was no trace of the *Eleanor* down south. At the same time it is certain that this will shut us up the whole winter on the ice, as the season is so far advanced now; and the responsibility of this I will not take on myself alone. I wish every one to give me his own mind on the subject; so you begin, Lieutenant Lowell, and let me have your say first."

"I vote for going on," was the quick response. "We can never expect to gain our object, unless we pursue it steadily."

All the crew were of the same opinion, and the Doctor and Robert, too; so it was determined that they should continue the voyage, at all risks. They knew this would involve manifold privations and sufferings, but each man was resolved to bear them bravely, without a murmur. So the anchor was weighed, and they sailed on again further, getting nearer and nearer the icy region of the North Pole.



HOW TO MAKE A CHEAP ROWING BOAT.

How to Build a Cheap Rowing-Boat.

ROWING is one of the most healthy and enjoyable recreations we possess. There are but few English youths who do not take a delight in this pastime, but unfortunately owing to the high price of even a small sized boat, there are not many so fortunate as to have one of their own. To those of my readers who do not possess a rowing-boat, I shall endeavour to describe how they may build one for themselves at a comparatively small outlay.

The boat here described can easily be made for 30s. or £2, it cannot well cost more, and might (with economy) be built for somewhat less; the principal outlay will of course be for wood, and the cost of the few screws, nails, tow, &c., required being very trifling.

Before commencing our boat, we must determine the size of the same, and here some little consideration will be required. A very useful size for an ordinary rowing-boat is 16 ft. long by about 3 ft. broad; but if you require a fast boat, it must be somewhat longer, and also narrower in the beam. It must, however, be remembered that what we gain in speed we lose in other qualities: a long boat is more difficult to manage and to turn than a shorter one; it is also more liable to get damaged and to capsize; therefore a shorter boat is to be preferred.

The boat I am about to describe is intended to seat one or two persons, but it will easily accommodate three; it could also, by slightly widening the beam, be made to carry a small sail; but unless you are a good sailor I should not recommend you to make this addition. A general view of our boat is given in fig. 1; it will be flat-bottomed, but I can answer for the good qualities of a boat of this description.

We will now consider the kind of wood to be used; oak is by far

the best, being both durable and strong ; deal could be used, and would be somewhat cheaper and easier to work, but if you wish for a really serviceable and strong boat, able to withstand rough usage, by all means use oak. You will require two pieces of nicely planed board about 16 feet long by 16 inches broad, these are for the sides ; for the bottom you will want three pieces of board 16 feet long by about 12 inches broad.

Your wood being ready, take the two boards intended for the sides and place between them two blocks of wood, each about $2\frac{3}{4}$ feet wide, as shown at E E, fig. 3 ; then take some strong rope or cord and wrap it tightly round both ends, as shown at H H, fig. 3 ; now procure and insert into the cord at J a strong stick, having inserted which you must twist it round gradually until the two ends of the board are brought nearly together at L. You must now make a cutwater, which should be of oak, 18 inches long, by not quite 1 inch wide ; insert this at L between the two boards ; now give the stick J another twist and the cutwater will, for the time being, be held tight between them ; then with a gimlet bore five or six holes through both boards and the cutwater, and secure all three firmly together with some good stout screws.

The stern end of your boat now requires attention ; a full view of it is given in fig. 4. It must be of oak, and should be shaped as shown : it should be at the top 36 inches wide, and about 18 inches deep. You had better perhaps make this somewhat larger than is actually required, for after it is fixed to the end of your boat it can be easily planed down, while should you by any chance make it too small, it cannot be enlarged. This must be fixed to the end of your boat at N, fig. 3 ; and be firmly screwed on with long thin screws, the holes for which should each be first carefully bored. It is scarcely necessary to remark that, however securely you make the joinings of your boat, the water will leak in : this is prevented by the joints being what is termed caulked, full particulars of which will be given as we proceed.

Having screwed your stern on as tightly as you are able, you will proceed to make the bottom of your boat : for this you must take the three pieces of board you have, and get a carpenter to make the sides to lap over, so as to fit one in another, as shown at B, fig. 2 ; having done this, you must place the boards together and secure them firmly in this position, by means of four pieces of wood, as shown at A A A A, fig. 2. You must now secure this to the bottom of your boat, using long thin screws, always being careful first to bore the holes for the same, lest you should split the wood, and thus, perhaps, seriously damage your boat after having proceeded so far well.

You have now, if I may so term it, the hull of your boat roughly finished, but without either being caulked, or without a keel, rudder, rowlocks, &c. Perhaps before proceeding any further, it would be as well to caulk your boat: to do this, you must obtain some tow and also some tar or pitch, in which you must well soak your tow, and then with the blade of an old knife ram it well into all the joints and crevices: it is all-important that you do this well, for if at all hurried your boat may be liable to leak.

Proceed now to make the keel: this must be of oak, about an inch deep and about the same width; it must be securely screwed along the bottom of your boat, having done which you may pitch the bottom well all over as an additional security of its being water-tight.

The rudder, which is represented in fig. 5, now remains to be made; this must be shaped as shown, and a piece of wood must also be screwed at right angles to the top of it (see fig. 5). This is in order that the rudder may be worked by the two small ropes, as will be seen by fig. 1. Two small hooks, D D, must now be fixed in your rudder, in order to hang it on to the stern; these can be made out of some strong iron wire, one end being firmly inserted into the rudder, and the other bent as shown. As yet you have nothing on which you can hang your rudder; you will have therefore to cut a strip of wood (A A, fig. 4), and screw it on to the end of the stern, taking care to fix it exactly in the middle; into this you must insert two pieces of iron wire and bend them round so as to allow the rudder to be hooked on (see fig. 4).

The rowlocks and seats next require to be made; for the former eight pieces of oak neatly rounded, and about an inch in diameter, will do capitally; they must be fixed into either side of your boat, as shown in fig. 1. The seats can be best made out of deal, some little care being taken to secure these firmly, or else some day, perchance, whilst rowing, they might give way, which, to say the least, would be very unpleasant. You have now only to secure two strings to the top part of your rudder, in order that the same may be worked by any one sitting in the stern of your boat.

In order to be quite sure your boat is water-tight, you had better, if possible, anchor her in some water, and then place some heavy stones in her; should no water leak in during twelve hours, you may be certain your boat is perfect, and only requires to be painted.

The best colours to use will be,—for the outside, white relieved by a thin stripe of blue; and for the inside, a light blue. Your seats might be made more comfortable by tying or nailing a small cushion upon them —and your boat is finished.

Caught by the Tide,

A BIRD-NESTING ADVENTURE.

ON the west coast of Cumberland is situated the pleasant little village of St. Bees, famed for its ancient college and school: to the latter it was my good fortune to be sent when very young. Among the many amusements which occupied our Saturday half-holiday, bird-nesting was always looked forward to at the approach of spring by many with feelings of lively anticipation. Many are the adventures I have met with while so engaged, one of which I now relate.

It is the month of April, too late for foot-ball, and too early for cricket, so some of the elder boys have decided on a bird-nesting excursion; and as I had, while walking on the cliffs, discovered a gull's nest far down below, I was asked by Tom Steele, who was making a collection of eggs, to come and point it out to him. We were to meet in the playground directly after dinner, and then go off quietly with two others, named Dand and Robertson, without letting any one else know; as, to discover a gull's nest was considered something wonderful, and if they found it out we should probably be forestalled. Steele had made a collection before, and had got gull's eggs; but then he paid sixpence each for them to the lighthouse man, who procured them by descending the cliffs with a rope—an exploit which none of us dare venture. Tom was rather elated at the idea of getting them himself, and therefore condescended to ask me to go with them,—an honour of which a little fellow like myself felt very proud. Having changed my clothes, and got a tin canister filled with cotton, I went down to the playground to meet the rest. They soon arrived, and it was decided we should first go to Lainthwaite Wood to get a hawk's nest, in which there ought to

be eggs by this time. As there was little time to spare, we jumped the playground wall, and then took a short cut for the wood, which being watched by a couple of gamekeepers, made us very careful how we went about it.

Crossing a ploughed field brought us into the high road, and after a sharp run down it we arrived at the walls which surround the wood. Here a consultation was held as to who was fittest to go in and get the hawk's eggs.

"I don't mind going," said Bob; "but I must have some fellow to go with me, for I shall want a chap to set me a back at the bottom of the tree, it's such a jolly thick one."

"Look here," said Steele; "you can't have Dand or myself, for we must keep 'nix,' and the young 'un can't set a back for you; he is not strong enough: so let him climb the tree, and you keep a good look-out at the bottom, for it will never do if we are nabbed."

"Keeping nix" was, in other words, keeping a look-out that no person might catch us. There was no need to give the alarm until some one was seen entering the wood, and when the signal was given away the scouts ran to the place appointed to wait for the rest. It being decided that Robertson and I were to go into the wood, the two scouts went to the two ends of it, and we lost no time in getting over the wall. Robertson took the lead; neither of us spoke a word, but kept a good look-out, so that we might not be surprised by the keepers.

In a short time Bob (for that was the name Robertson was called at the school) stopped at the foot of a fir-tree, and, pointing to an old crow's nest, he said, "Now, then, look sharp; that's what you have to get at."

Buttoning up my jacket, I mounted his back, and with a spring which sent him reeling, began to climb the tree. I now got in among the branches, and began to pull away the sticks of the nest. I could not get at the top, it was built so broad and high; pulling away sufficient, I put in my hand, and felt three eggs. To pull them out was the work of a minute; they were hawk's, and of a pale bluish white colour, and blotched with a sort of dark reddish brown. I put them into my tin canister, and then calling out to Bob to catch, threw them down and began to descend. I had got about half-way down when we heard a shrill whistle from the top end of the wood.

"Hear that, young 'un?" said Bob; but before I had time to answer he exclaimed, "'Nix, nix,' drop, and make for Stanley pond;" and off he started at full speed. I dropped, and, as I landed on a rough piece

of ground, fell; but was up again directly, and, looking round, saw a man running towards me. I started off, keeping Bob in sight. Again we heard a whistle; but this time it came from the bottom of the wood, which clearly showed that both of the keepers were after us. Rushing on at the top of our speed through thick bushes and all manner of thorns, we came in sight of the wall. We thought we were all right, but no sooner had we cleared it and were running across the small field which divides it from the road than we observed the keeper stealing up along side of it.

"There's a place to put your foot, young 'un," said Bob; "you pop over and I will chuck the eggs over to you."

I ran straight for the wall, put my foot into the hole, and was just in time to catch the eggs which Bob had thrown over. I made straight for Stanley pond, and got there just a minute after Steele and Dand.

"I've got the eggs," I said, as soon as I had recovered my breath.

"Well, that's something like," said Tom; "but where's Bob?"

I then told them what had happened. It being agreed that we should wait half an hour, we sat down to blow the eggs. We had grown pretty tired of waiting, when we heard a whistle in the next field, and soon after Bob came in view.

"Well, so you gave them the slip, Bob," said Steele, as soon as he came up to us.

"Oh, yes! I ran along the wall side, and when I saw a good footing I bolted over, and they too, for they never left me until I jumped the Beck."

"Come on," said Tom, "for we must not lose time; we shall not get to Fleswick until five o'clock, and if we do not look sharp we shall not be in time to answer our names at call-over; so let us be off."

We started at a trot, and soon got upon the Whitehaven Road, and a run down that brought us to a little lane which leads to the Heads. The Heads were the cliffs running from St. Bees Bay to Whitehaven, which in some places were quite four hundred feet high and almost perpendicular. At Fleswick stood the lighthouse, which was the only one for miles round, with the exception of the one at the end of Whitehaven Pier. Half a mile brought us to Fleswick Bay, and here we descended. On gaining the beach, we turned to the right and made for the rocks. After a quarter of an hour's run over the high pieces which had fallen from the heights above, we came to a little beach of sand and pebbles, at the bottom of a cliff which is perpendicular for about eighty feet. This little beach extends for nearly half a mile, and terminates at a point. The next hundred yards are nothing but huge

pieces of rock, piled one above another, and extending far into the sea, forming quite a little headland. Passing over these, we came upon a second little beach, like the one I have just described, with the exception that a person could climb from the shore to the height of about twenty feet.

"I say, youngster, have you not passed it?" said Tom, after we had got over the last pieces of rock and were once more standing on the shore.

"Oh, no; we have not far to go now," said I. "You see that long piece of rock sticking out from the rest above our heads yonder? Well, that's the place;" and with that we started off running again. A few minutes more and we arrived at the bottom of the rocks, and the next moment we had all begun to climb. Up we went, and a shower of loose stones and earth fell rolling down at each step we took. We soon gained the first ledge, and after resting a few minutes we began to climb again.

"Look out that you don't slip, or it will be all over with you," said Bob (for we had worked ourselves over to where there was a cliff about thirty feet high, and nothing to break the fall till you came to the bottom). "Don't look down, for that will make you frightened. Do you hear, young 'un?"

This was said to me, for I had stopped, and was looking down at the sea, and had already begun to feel my knees shake. I, however, grasped the grass tighter, and turned my head away from the sea.

"At the top at last," said Dand, who had kept ahead of us all the time.

"So am I," said Bob, who was second on the little ledge, and in a few moments Steele and I were there also.

"Now, Dand and Bob, you set a back, and I will soon get at the nest, if there is one at all," said Tom; for they had begun to think they had been sold. While Steele was taking off his boots Dand and Bob had placed their backs against the rock, and the next moment Steele had mounted on them.

"Stand steady and firm, for I am going to make a spring," said Tom, and soon he had half his body on the ledge, and in a short space of time he was standing upright. We lost sight of him for a few minutes, but soon heard him shout out, "Two eggs, by all that's glorious; it's worth all the trouble we have taken to get at them."

"Come, Tom, don't think you can gammon us that way," said Dand.

"It's a fact," said Tom; "and to show you I am not joking,

look here." And he held out one of the eggs over the ledge of rock.

"I say, pull me up, and let's have a look," I said, when our excitement had in some degree subsided.

"All right; give me your hand." I mounted on Bob's back, and, giving Steele my hand, I was pulled up, and then went to see the nest. It was of considerable size, formed of seaweed and grass. The eggs were of a dark straw colour, with blotches of dark brown. After we had rested a little, we began to descend. Going down was far easier than getting up, for we had only to keep a good hold of the grass and projecting roots to prevent us from sliding headlong to the bottom. When we got down on the beach we were surprised to see that the tide had almost reached the bottom of the rocks, and knowing how fast it came in at that part of the coast, we all began to run as fast as we could; but running was no easy matter on such ground as that, sinking at every footstep up to the ancles. After some little difficulty, we reached the first little headland of rocks. And then the question was put, whether we should try and make an ascent here, or try and get to the next point. A glance showed us that we could not get to the top here, and we all knew that there was a sheep-path by which we could ascend at the next point. But the question was, could we get there before the tide could reach the bottom of the cliffs? We had stayed so long at the gull's nest that the waves had almost reached the bottom of them by this; and, besides, we had nearly half a mile to run; but that was the only chance left, and we preferred taking that to staying where we were. We had no time to lose, so we ran with all our speed over the loose stones and rocks, slimy with ooze and seaweed. We ran, and the place seemed to get farther and farther; but still we ran, sinking at every footstep in the noisy and yielding mixture of sand and pebbles. At one spot the tide had already reached the foot of the cliffs; but still if we could get to the spot while the water was sufficiently shallow to allow us to pass, we knew that we should be all right.

Have you ever run a race with the sea? If not, accept the testimony of one who has, that it is a very painful and exciting race. To take your life in your hand and run, knowing that the sea is gaining upon you, and that, however great the speed with which fear wings your feet, your subtle enemy is intercepting you with its many deep inlets. And then to see it has intercepted you is worst of all, it is a moment not to be forgotten. All this is what we had to undergo. We ran until we panted for breath, and stumbled for very weariness; but we were too late. A broad sheet of water had now bathed the bases of the cliff, and

the waves, as though angry with the opposing breeze, were leaping up with a frantic hiss, and deluging the rocks with sheets of spray and foam. To turn back was equally impossible, for the sea had gained on the rocks at the other end of the shore. We knew too well with what speed and fury on that dangerous coast the treacherous tide came in. There was not a moment to spare, so we made for a ledge we had passed, and with all haste we got on it. It was a moment never to be forgotten. Picture to yourself a long sea-wall, like that of a stone pier, with a ledge about eight feet broad, above that the cliff rises to the height of about sixty feet, and as smooth as the side of a house.

On this ledge we all managed to get, with nothing before us but the sea, which was every moment rising higher and higher; and behind the bare rocks, which can afford no shelter at all.

"What can we do?" said Dand, who was the first to speak after we had climbed on the ledge.

"Whatever we intend doing we must do quickly, for we have not a moment to spare," answered Bob, who was the only one who seemed to retain his presence of mind.

"We all know that the tide will be on a level with this ledge in about an hour's time, and that if we do not get away from this place before that, we shall——"

Whatever he was going to say he did not say it; but we all knew what he meant. We did not speak for some time, but each one thought the more. Ours was a truly horrible predicament. Before us the hungry, angry, darkening sea; behind us, the inaccessible cliff.

"I know only one way to get away from here," said Bob, after a short pause. "Both you and Dand can swim, and if you can only reach those rocks you can get up by that path, run round the Heads, and get old Jackson's boat, then row round and pick us off. But whatever you do, you must do it quickly."

"We can both swim, I know," said Dand, "but swimming for pleasure and swimming for life, are two totally different things; besides we have to swim with our clothes on, and if we have to swim for it, let it be when we cannot stop here any longer."

"But, Dand, there are more lives depending on you than your own," said Bob; "what have the youngster and I to do? Would you let us drown when you can prevent it?"

"Oh, Bob! I really did not mean what I said. I let you drown? Oh, you know I would not! I'll go. Off with your boots, Tom, and your coat, for you will have to help me to launch and row the old tub,

so look sharp;" and with that he began to take off his boots and coat, Tom doing the same.

"Now then, Tom," said Dand, "tie your laces together, and put your boots over your neck, for you will want them when you begin to climb the rocks; you can leave your coats here, for they will only be in the way."

"I'm ready," said Steele.

"So am I," said Dand.

"Before you go," said Bob, "let me tell you this, that you have not a moment to lose; in an hour's time, at the most, the tide will have covered the ledge, and if we are not taken off before that it will all be over with us; so do not lose any time."

"Trust me for that," said Tom, "we shall be in time to prevent such a thing as that, I hope; so now we must be off."

Walking down to the lowest part of the ledge they plunged boldly into the angry sea; when once fairly out of their depth, the exercise seemed to warm them, and they rose with a swimmer's triumphant motion over the yielding waves. On they swam, diving under this huge wave, mounting that one, until we had almost lost sight of them.

"They are landing," said Bob, who had never taken his eyes off them the whole time; "and now I wish them God speed."

We saw them shake off the wet, and commence climbing the cliff, and in a few moments we lost sight of them.

"How long do you think it will be before they reach old Jackson's boat?" I then asked of Bob.

"Well, let me see, they will get to Fleswick in five minutes, and then from there to the caves will be ten minutes more; that makes a quarter of an hour, ten minutes more will bring them to the bottom of the beach, and by the time they get to the boat and launch it, it will make the half hour. We will stand a poor chance if they are not here in an hour."

After this we neither of us spoke a word, each was staring at the approaching sea. The sun was setting, and all the sky for miles round was a deep red. We watched it as it sank into the west, and wondered if we should be spared to see the sun of to-morrow. The tide had by this time reached nearly the top of the ledge.

"Do you not think, Bob, that we are out of the reach of the waves even at high tide?" I said, still staring at the advancing sea. He gave me no answer, but pointed up to the cliffs above our heads. A glance upwards brought home the appalling fact that the sea mark where the

highest tide fringed its barriers with a wreath of hanging sea-weed, and below which no foliage grew, was far above our heads.

"Oh, Bob, what shall we do?" I asked.

"What can we do?" said Bob; "but wait until the boat comes."

"But should they be too late? I mean to say should they not come in time?"

"We will hope they will come in time," said Bob; "but if they do not, we must be prepared for the worst. Come, stand nearer to me, for you look cold."

By this time every wave that broke sent the spray flying over us; disregardful of our growing horror and wild suspense, it continued its uncouth play, leaping about the rocks, springing upwards, and stretching its high hands as if to pull us down, seeming to laugh as it fell back shattered and exhausted, but not subdued. During this time we neither spoke a word, each was deep in his own thoughts. I pictured to myself the time when the waves would rise to my knees, then to my waist; then it would float me off my feet, and would carry me off the ledge into the deep abyss; then a struggle, and I should sink, the water would gurgle wildly in my ears and stop my breath; and then all would be still. Steele would come in time to save our bodies from being dashed to pieces, they would take us back to the school (the place we had left but so few hours before, in health and strength), and lay us in the little sick room. Next morning the flag would flutter half-mast high on the tower, the boys would go about quietly, there would be no banging of doors, no shouting, no whistling—all would be still.

I was roused from my reverie, by Bob telling me to hold tight, and he grasped my shoulder with his hand; it was not a moment too soon, for a high wave came, and breaking at the top of the ledge sent the spray and foam flying over us."

"If they are not here soon there will be two less in the world," said Bob, in a hoarse whisper; "for a few more waves like that, and all will be over."

The sea-mew flew past uttering its plaintive scream, as if it were our requiem. Neither of us spoke, but we watched the waves that would toss us upon their playful spray, and then dash us as they dashed their own unpitied offspring dead upon the rocks.

"Look out! here is another one coming," said Bob, and grasping me again we waited until the wave should break; on it came increasing in size, nearer it drew, and then overbalancing itself, it fell with a crash at the top of the ledge, and nearly took us off our feet."

Another wave was rising like the former one; on it came, and broke with the same force.

"They should be near here by this time," said Bob, in a tone of despair. "Oh that they would come! Hark! did you not hear that? It was a shout. There again, they must be at the point; shout and let them know we are here, or they will pass us."

I heard him speak, but I could not answer. My brain was dull, my senses blunted, I caught the sound of splashing oars, I saw the black outline of a boat not twenty feet from me; I stared eagerly at it, and just as it came beside me, my strength failed, and, uttering a faint cry, I slipped down fainting into the waves.

"Stand back; give him room; give him air; don't 'crowd so,' were the words I heard when I recovered my senses. I tried to recall what had happened, and then, like a flash, it came upon me. The hideous green waves, dashing on the rocks and sending the spray flying in clouds round me; the sea-mew, with its plaintive shriek, all came crowding on my mind with such rapidity that I nearly swooned again.

"You are all right now, young 'un," said one of the boys; "go and change your wet things, or you will catch cold. And then come and have something to eat in the kitchen."

I got up and looked round. I was on one of the dining-room tables, and all the boys were standing round me. I went upstairs, changed my clothes, and then went into the kitchen, where I found the other three waiting for me. They told me they arrived just in time to save me, as the waves had already swept me off the ledge. Bob tried to catch me, but he could not hold me, and if the boat had not come up at that instant I should have been drowned. We spent a very pleasant hour, talking round the fire, and telling the boys how we came to be in such a plight. The eggs were handed round for all to look at. When bedtime came, and we all stood up for prayers, none prayed more earnestly than we four. As soon as prayers were over we rushed upstairs, and I, like the rest, soon dropped off to sleep. And so ended my bird-nesting adventure.

Stephen Scudamore the Younger;

OR,

THE FIFTEEN-YEAR-OLDS.

A STORY OF BOYS' ADVENTURES AT HOME, ON BOARD A PASSENGER SHIP, AND ON THE AUSTRALIAN GOLD-FIELDS.

By ARTHUR LOCKER.

PART III.

CHAPTER II.

A Fortunate Visit.—Mr. William Hayward's Offer.—My uncivil Reply.—A Letter at Breakfast-time.—Another Offer.—My Delight.—Prawle's Melancholy.—A Trip to London.—Farewell.—On board the *Ruth Hayward*.—Mr. Hennessy and I in the Store-room.—The Boy with the Lantern.—My Surprise.

WHEN I had been some months in Liverpool, and had begun to learn the ways of the place, I found that our firm stood very low in public estimation. One day when I was crossing the Exchange I heard one man say to another, "If you want a job of that sort done, you must go to a cad like M'Gaffney." The blood mounted to my cheeks as I listened to these insulting words; and I made a resolution that before another month ended I would write to my mother, and ask her to try and get me into some other office. As for my poor father's hundred pounds, which he was painfully paying off to his publishers by the labour of his brains, I feared, now that I knew what a slippery gentleman Mr. M'Gaffney was, that we should never get any portion of it back again.

It was not often that I put my head into the counting-house of any respectable firm, the people with whom we had dealings were mostly small shabby folks like ourselves, who squabbled over the settlement of every account, and never paid any money till they had been asked for

it half a dozen times. But one day—I always mark that day with a white stone in my calendar—Mr. M'Gaffney sent me to collect a small sum of money which, for a wonder, was due to us from the great firm of Hayward Brothers & Bannister, who were not like Hailes, M'Gaffney, & Co., pettifogging little agents, screwing their profits out of the pockets of poor helpless Irish emigrants; but real shipowners, owning a whole fleet of noble vessels. Instead of our dingy little office with a fly-blown map of the United States over the mantelpiece, and old Parker in his rusty brown tail-coat wrangling at the counter with a Tipperary farmer about a matter of eighteen pence—instead of this seediness and shabbiness, the whole of a roomy, old-fashioned mansion was devoted to the business of Messrs. Hayward Brothers & Bannister. There was the Silk Department, the Cotton Department, the Freight Department, and I don't know how many other departments; and in each of these offices there was a swarm of clerks, dressed in the height of fashion, and extremely grand and haughty in their manners. I was ordered about from pillar to post before I could get my little account settled. At last a young gentleman with a blue necktie condescended to scribble his initials upon it in red ink; then another young gentleman in a green necktie scribbled his initials on it in black ink, lastly I was referred to the Cash Department, where I received the money. I was just in the act of writing the receipt "Hailes, M'Gaffney, & Co., per Stephen Scudamore," when a plainly-dressed shrewd-faced elderly gentleman looked attentively at me as he entered the room and passed in through a little railed door among the clerks. He took up the account which I had just signed, and examined it with some curiosity, saying something in the cashier's ear as he did so. I was in the act of pushing open the swing-door, in order to leave the office, when I heard a peremptory voice behind me, saying, "Hey, you boy!" I turned quickly round and saw that the cashier was beckoning me. I was in a great fright, I thought I had unintentionally committed some dire mercantile offence, and wondered what it could be. I became a little reassured when the cashier went on to say in a pleasanter voice, "Mr. William Hayward wishes to speak to you—that green door yonder."

"Come in, my boy, don't be alarmed," said a good-natured voice, as I entered with hesitating steps. "I want to ask you one or two questions."

In another moment I found myself face to face with the great shipowner; but he looked so benevolent, that I felt far more at home with him than I did with Mr. M'Gaffney.

"I see your name is Stephen Scudamore," said Mr. Hayward, "is your father's name Stephen also?"

"Yes, sir."

"Was he ever in the East Indies?"

"Yes, sir. At Bombay, where he was a surgeon."

"Exactly, that's the man I mean."

Mr. Hayward then went on to ask me a number of questions about my father's present occupation and prospects, and expressed great regret when he heard that he had paid a hundred pounds for the sake of placing me in such an office as M'Gaffney's.

"You may be surprised, Scudamore," continued Mr. Hayward, "at my showing so much interest in your father, when I tell you that up to this moment I have never set eyes on him; but you must know that many years ago, while I was engaged up the country, my wife was taken very ill in Bombay, and was ordered to leave immediately for a cooler climate. She went to the Cape of Good Hope, and she always spoke with gratitude of the kindness she had received from Mr. Scudamore, the surgeon of the ship."

"I think that must have been my father, sir, for he is kind to everybody, and I believe he is a clever surgeon. But he has not the art of making money. He is so easily deceived. He thinks everybody is as honest and simple-minded as himself."

"So I should suppose," said Mr. Hayward drily. "Now, do you like being at M'Gaffney's?"

"No, sir. I dislike it very much. I think I should run away if it wasn't for Prawle."

"Who is Prawle?"

"Another boy who is there. He hates it as much as I do."

"How should you like to come into my office?" said Mr. Hayward, smiling, and playing with his watch-chain.

"I think I should like it better than M'Gaffney's, sir."

"Better than M'Gaffney's!" exclaimed Mr. Hayward, half annoyed and half amused; "I should think you would! Why, are you aware, Scudamore, how eagerly the seats in my counting-house are sought for? I have two noblemen's sons and the heir to a baronetcy among my young men."

"Perhaps they are fonder of sitting at desks than I am, sir." The moment after I had uttered these words I could have bitten off my tongue for making such an impudent, ungracious speech; but it was too late.

"Very well, my boy, I have no desire to compel you to enter my office," answered Mr. Hayward. Then, after a pause, he said, "Be kind enough to give me your father's address, I should like to write to

him. Good morning." He said these last words quite stiffly, and I went away covered with confusion. I felt so angry with myself for not having thanked Mr. Hayward for his kindness, instead of blustering out such a rude remark as I did; but I was particularly shy and awkward that morning, for I fancied that Mr. Hayward must have heard of my brother Alfred's misconduct, and expected every minute that he would allude to it. I did not consider how big a town Liverpool was, and that probably not a week passes without some unlucky clerk getting himself into some serious trouble.

After tea that evening I confided my adventure to the ears of Mr. Prawle, and he gave me a fine scolding for my folly.

"Why what a fool you've been, Stephen," says he. "Mr. William Hayward is one of the first men in Liverpool. There's as much difference between him and this chousing humbug whose carpet I'm treading on, as there is between the horse that won the Chester Cup and a broken-down costermonger's donkey. I should have jumped out of my skin if Mr. Hayward had offered me what he offered you."

"Wouldn't he have been very much surprised, Prawle, if you had?" I answered, laughing.

"Well, well, you know what I mean—I spoke meteorologically. They're all swells in Hayward's office. It's a feather in a man's cap to have served there. There are all sorts of good appointments in India, and China, and in the Brazils, to be got from Hayward's office. I only wish I could persuade the old boy that *my* father had physicked his wife; wouldn't I work the oracle, and no mistake? I should be appointed to a berth in the Wool, or the Jute, or the Cotton Department before next Monday morning. I'm afraid, Stephen, you're a flat, as your father was before you."

"I'm much obliged to you, Prawle, for being so candid," I exclaimed rather fiercely.

"You ought to be obliged to me," says that red-faced rascal, quite gravely. "I'm your best friend, Stephen, parents not excepted."

In the course of a few days I heard from my mother. She told me that my father was delighted at a letter he had received from a Liverpool merchant, thanking him for his skilful treatment of a lady on board an East Indiaman, thirty years ago. "Your father," continued my mother, "instantly sat down and wrote a long and very interesting letter to Mr. Hayward in reply, but he never said a word about Mr. M'Gaffney, nor did he thank Mr. Hayward for his offer to put you into a better position. I have tried to make up for the deficiency. I have slipped in a note for your famous merchant friend, telling him what a dear,

excellent, unpractical creature your papa is; telling him also exactly what my views are about you, and what you would like yourself. I feel so angry with that horrid Mr. M'Gaffney for deceiving your poor innocent father. Your father confesses that when he met him at the Crooked Billet, he judged him to be one of the commercial pillars of Liverpool."

A few days afterwards we were all sitting at breakfast in St. Ninian's Terrace. Mrs. M'Gaffney was occupied with pouring out the tea, Biddy was busy at the sideboard cutting bread-and-butter (for there were two master mariners and three mates at the table, all with appetites as keen as sharks), Mr. M'Gaffney was reading aloud the London letter in the *Liverpool Albion* for the benefit of the assembled company, while Prawle and I, being modest youths, were staring solemnly at the Chinese figures crossing the bridge in our willow-patterned plates. Suddenly the postman knocked at the street-door. Mr. Prawle jumped up to take in the letters, for he was expecting his monthly allowance of pocket-money from Bow. It did not come, as he hoped; but he handed me a letter instead, saying, as he did so, "Quite an aristocratic affair, Stephen."

"Sure, that's an elegant seal, Mr. Scudamore," cries Mrs. M'Gaffney, suspending her tea-pouring operations. "It reminds me of my grandfather's letters when I lived at home in the county Wexford."

"A confidential communication, eh, Scudamore?" says Mr. M'Gaffney, looking up from his newspaper with a sly smile.

"Oh, no, sir; you can read it, if you please."

So Mr. M'Gaffney read it aloud:—

"Mr. William Hayward will feel obliged if Mr. Scudamore will call at his office this day (Monday) at twelve o'clock."

"Bless me," exclaimed Mr. M'Gaffney, with quite an air of astonishment—"do you know Mr. William Hayward?"

"A little, sir. My father did him a service many years ago, for which he feels grateful."

"Stephen," exclaimed Mrs. M'Gaffney, "I'd no conception ye were acquainted with such grand folks! Sure, ye must put in a word for my poor husband. Couldn't he give Mr. Hayward a hint about that prime lot of mess-beef, eh, Pierce, darling?"

"Nonsense, Katie," answered her husband. "That's not the way to do business. First, let us hear what Mr. Hayward wants to say to Mr. Scudamore."

But on this point I declined to give any information, so Mr. M'Gaffney went on reading the paper, with his mouth full of buttered toast and bloaters.

You may be sure that I kept the appointment punctually. Exactly as St. Nicholas clock struck twelve I mounted the stairs of Messrs. Hayward Brothers & Bannister's establishment. I was only kept waiting five minutes, and was then ushered into Mr. William Hayward's private apartment.

"Well, Scudamore, I have had a letter from your mother. She tells me that you don't like office work, and that you are bent on going to Australia to dig for gold. I think you are a foolish fellow. I don't suppose you will find any gold, and you will undergo a great many hardships."

"That's just what I should like, sir."

"Oh, should you?" said Mr. Hayward, laughing. "Well, well; perhaps I should have said the same at your age. Now I'll tell you what I propose to do. For your father's sake, I am determined that you shall not stay at such a wretched place as M'Gaffney's."

"Thank you, sir, very much."

"I am still willing, in spite of your refusal the other day" (here I blushed deeply), "to take you into my office; but, if you prefer it, I'll send you to Australia. Which do you choose?"

"Australia, sir!" I cried.

"Very well. Don't blame me hereafter if you regret your choice."

"Certainly not, sir."

As I said these words Mr. Hayward touched a hand-bell. A clerk instantly appeared. "Ask Captain Staunton to be kind enough to step this way."

In a few minutes there entered a very tall stout handsome man of forty, with a close-shaven face, dyed nut-brown by exposure to the weather.

"Staunton," said Mr. Hayward, "this is the boy I spoke to you about."

"Ever been to sea, young gentleman?" said Captain Staunton, with a smile.

"No, sir."

"What shall we do with him, Staunton? He wants to get to Melbourne."

"Well, Mr. Hayward, I'll tell you. We shall have nearly three hundred passengers on board. My third mate will have more than he can do serving out provisions. The lad looks smart and active. Suppose we ship him for the passage as purser's clerk."

"Ah!" said Mr. Hayward. "How do you like the idea, Scudamore?"

"Very much indeed, sir."

"Then run along, and talk over it with Captain Staunton."

I can't describe to you the wild state of excitement which I felt when everything was satisfactorily arranged. I was unfit for any grave sober business, for if I was out in the streets I felt inclined to shout and skip about like a madman. My liveliness made poor Prawle quite melancholy. "Lucky young rascal!" he muttered; "you'll come home with your pockets full of money, while I shall go on grinding here till I'm as old and as fusty as Parker. I can't stand it much longer—no, I can't. I shall cut and run. I say, Stephen, you must speak a word for me to Captain Staunton. Tell him you know a fellow of priceless value, whose services would be most useful on board the *Ruth Hayward*. Tell him I'm ready for anything. I'll take the command of the ship when he feels lazy, or, if that won't do, I'll feed the ducks and chickens. Stephen, old boy, we mustn't be separated. I can't live without you." And with these words he embraced me in the public street, putting his red face over my shoulder, and kicking out one leg, as comic actors do on the stage.

Mr. M'Gaffney was rather sulky when he heard the news. He wrote a long letter to my father, in which he informed him that I was taking a step which would seriously injure my future prospects, and he hinted that, in case I persevered in my foolish enterprise, he should be compelled to demand substantial compensation for the loss of my services. My poor father was so frightened, that he actually wrote a letter asking Mr. M'Gaffney what sum would satisfy him. Luckily my mother intercepted the letter, and forwarded the whole correspondence to Mr. Hayward. A day or two after a confidential clerk from Mr. Hayward's called on Mr. M'Gaffney. I don't know what arguments he used, but we were never afterwards troubled with the claim for compensation.

I then went up to London, and spent a delightful fortnight with my father, mother, and Lucy. My mother was exceedingly busy, preparing and packing my clothes, and buying all sorts of things—which afterwards turned out of little or no use. My father tried to make me understand the elements of geology, which he said I should find of the highest importance; and presented me with an abstruse work on that subject by Sir Roderick Murchison, which he bade me read carefully during the voyage. Lucy and Clara Ainslie and I wandered about the fields, or rode Bruno and Gipsy, who, though older than they used to be, had still plenty of life in them. Indeed, Bruno was as full of mischief as ever, and contrived the very last afternoon I ever rode him to pitch me into a holly-bush. Then came the parting at the North-Western railway station. The scene is still depicted in my mind's eye:

Lucy with a brown parasol, Clara with a blue parasol, my mother trying to smile through her tears as she gave me the last kiss at the carriage-window, and one great big tear rolling down from under my father's spectacles. The remorseless engine shrieked, the guard blew his whistle, and away we went.

Prawle met me at Lime Street. To my surprise his manner was quite resigned and cheerful. "It's all very well for you, Stephen," he said, "who are in the bloom of youth,"—he was barely sixteen himself, —"but I've made up my mind that we old fellows had better stay where we are. Besides, since you left I've been studying M'Gaffney's character carefully, and I've discovered new beauties in it of which I was previously unaware. I mean to be contented with my humble lot." There was a curious twinkle in his eye as he said this, but I thought nothing of it; I had mentioned Prawle's wish to Captain Staunton before leaving Liverpool, but he had given me very little encouragement in reply, and I did not care to speak again, for fear of giving offence.

At last came the long-expected day of departure. The *Ruth Hayward* hauled out of dock into the stream, and most of the passengers came on board, as it was arranged that the tug steamer should take her in tow the following morning soon after daylight—and daylight comes early in the month of June. Captain Staunton had requested me to come on board the preceding afternoon, telling me, as soon as I arrived, to report myself to Mr. Hennessy, the third mate, under whose orders I was to be. In the course of the morning I went round to bid various Liverpool friends good bye. I called upon Mr. William Hayward, and, after waiting half an hour or so, was fortunate enough to find him disengaged. He received me very cordially, and, repeating his warnings about the dangers and hardships of gold-digging, handed me a letter of introduction to Messrs. Turnbull & Anderson, the firm in Melbourne to whom the *Ruth Hayward* was consigned.

"If you find yourself, Scudamore,—as is not unlikely,—in some great strait, present this letter, and I am sure Mr. Turnbull will help you."

I thanked Mr. Hayward very cordially for his kindness, and then bade him farewell. At the moment of parting, he put a little leathern pocket-book into my hand, said that I might find its contents useful, although I was going to the land of gold, and then good-humouredly pushed me out of the office. When I came to examine the pocket-book, I found that it contained ten bright bran new sovereigns. I had never been owner of such a sum of money in all my life, and for a few

moments felt an inexpressible desire to buy presents for pater, mater, and Lucy; but, after a while, prudence began to prevail, and I stowed the precious little packet away in my securest pocket. I couldn't resist going to St. Ninian's Terrace to bid them good-bye. Mrs. M'Gaffney took me in her arms, and hugged me as if I had been her son three times over; and then Biddy must needs follow her example, and as she had just risen from blackleading the stove, left several marks of her affection on my cheeks. Mr. Toohey, the porter, insisted upon carrying my luggage to the landing-stage, although I assured him that all, excepting a carpet-bag, was already on board. Mr. M'Gaffney, whom I saw for a moment at the office-door, shook my hand quite warmly. He told me that he had for some time been thinking of adding an Australian branch to his emigration business, and that if I chose to accept the Melbourne agency, he would admit me to partnership on very reasonable terms. In my belief, Mr. M'Gaffney would have taken a new-born baby into partnership, if he could have screwed a premium out of its parents and guardians.

But where was Prawle, for whom I cared much more than for any of these people? Nobody had seen him at the office since nine o'clock in the morning. I went to his uncle's in Williamson Square. He had been there at half-past nine o'clock, had astonished his uncle by asking him for the loan of a sovereign, and had afterwards retired rather unwillingly with the borrowed sum of three and eightpence. From that time forwards I could discover no trace of him, and made up my mind that it was rather unkind of him to keep out of the way, instead of coming to bid me good bye.

I shall not describe the scene of turmoil and confusion which existed on board the *Ruth Hayward*, because I shall have to refer to this subject afterwards. It is enough to say here, that I climbed the ladder which hung over the ship's side, and sought for Mr. Hennessy, the third mate. After some trouble, I found him in the store-room—an apartment about as big as a good-sized cupboard—and at that moment nearly full of boxes, barrels, and parcels, all stowed higgledy-piggledy, everything at top, and nothing at hand. Among these Mr. Hennessy was diving in his shirt-sleeves in hopes of bringing to the surface the articles which he wanted. I at once took off my jacket, and set to work to assist him. We got through a considerable amount of pulling and hauling, and in the course of a couple of hours had reduced the store-room to something like order. By this time it was getting nearly dark, so Mr. Hennessy bade me go to the forecastle, and tell one of the ship's boys to fetch him a lantern. I swelled with importance on receiving this simple message,

but its execution was attended with some difficulties, because I did not know where the forecastle was, and several of the passengers, who were idling about the decks and of whom I asked the question, appeared no wiser than myself. At last I obtained the required information, and shouted down the dark fusty-smelling mouth of the forecastle as Mr. Hennessy had instructed me, "Below, there! Please to send a boy with a lantern to the store-room." Within ten minutes or so, somebody stumbled into the store-room with a lantern in his hand.

"Do you belong to the ship?" asked Mr. Hennessy.

"Yes, sir," was the reply.

The tone of the speaker's voice startled me. I looked at his face, and immediately recognized the familiar features of old Johnny Prawle, rigged out in spick-and-span new seaman's toggery.

(To be continued.)

A Horrible Sell.

IT was now approaching Christmas time, the actors in the tragedy (we always had a tragedy at Christmas) had already received their parts, and had commenced to learn, and even to rehearse them, while amongst the "non-actors" all was excitement to discover the name of the play. The boys who had determined to find it out, by hook or by crook, had formed into "factions" consisting of three or four boys each; these used to assemble at the beginning of every recreation and plot together how to find out the name of the tragedy. This was no easy task, I can assure you, because there were only certain ways of going about it: in the first place, of course it was dishonourable to pick an actor's pocket and discover it by those means; secondly, while the actors were rehearsing they were accustomed to place sentinels in every possible place where a wily non-actor could creep in; in the third place, there were the masters to baffle, and the punishment for leaving bounds was so severe that few cared to run the gauntlet of the masters' eyes for the sake of finding out the play.

Well, day after day had passed and no one had yet made any discovery that would serve as a clue. I had so far taken apparently no interest in what was going forward, but in reality I was a member of the most formidable faction in the college; there were three of us,—myself, Jones, and Robinson. Jones was the happy possessor of a volume of Shakspeare's plays, Robinson was the most cunning fellow in the college (and was nick-named Fox accordingly). They were both great chums, and some time before Christmas, in fact before the actors had received their parts, had vowed to go through fire and water rathers than miss finding out the name of the play. As I was acknowledged to *look* the quietest fellow in the college, they had agreed to receive me

into partnership. This was done in the following manner :—one day as I sat quietly reading by myself in a corner of the play-room, Jones walked over to me from the opposite side of the room ; after talking to me for some time he came to the point, "I say, Brown, will you join me and Robinson to find out the play ?"

"Well, I don't know," I said ; "I don't care a rap about the thing ; but, of course, if you think we can do it I'll join you."

"All right, we're certain to find it out, and we'll tell you the dodge at four o'clock, if you'll swear not to peach."

I gave my word of honour to keep his secret and he left me, while I continued my reading.

Punctually at four the two chums walked up to me and revealed their plot (alas ! the walls have ears). I was delighted with it, and we resolved to put it into execution on the following evening. I slept but little that night ; my former indifference was now transformed into the wildest excitement ; the next day seemed too long to be borne. I couldn't attend to my lessons, and was punished accordingly. At last evening arrived, supper was over, and at half-past seven the actors retired to a school-room at the top of the house to rehearse their parts ; some boys went to the play-room, others began to play billiards, the factions met, and some non-actors who cared little whether the play was discovered or not retired to the reading-room to write letters, study, or otherwise employ themselves.

I, Jones, and Robinson were of this number. We all managed to sit together, but assumed as indifferent an appearance as possible under the circumstances. At last Robinson gave the signal which we had agreed upon, so as all to work together ; at this we slipped off our shoes and put them in our pockets, then a very small boy who was in the plot, and held his tongue under pain of the most awful licking, went up with his lesson-book, and engaged the master's attention, while I dropped on my hands and knees and noiselessly left the study. Jones and Robinson having done the same, we all three stood outside the door thinking what to do next ; at our backs there was a window which opened into the play-ground. After much deliberation we arrived at the conclusion that our next step should be into the play-ground ; it was awfully cold and our teeth chattered in our heads. We crept along in the snow close under the study windows, then turned to the left into the gymnasium ; here we put on our shoes as we had to drop from a wall ten feet high ; the snow was so deep that we didn't hurt ourselves. We were now in the farm-yard, and the next proceeding was to look about for a ladder. Having found a pretty long one we carried it till we were under the

school-room window where the actors were rehearsing. Jones surveyed our company—our hands were benumbed as well as our poor feet, our noses were a beautiful blue, and our features generally had become a livid purple—in a sepulchral voice he asked the awful question "Who's to do it?"

"Let's toss up," I suggested.

The proposal accepted, my two companions tossed first. Robinson won, from that moment he began to look warmer; then I tossed with Jones: "Woman," I cried, my teeth chattering with cold. Jones raised his hand, the coin had turned up head. My first thought was to refuse, but upon second reflections I saw how hopeless my case was, and without any more delay began to ascend. When I reached the top of the ladder I had to swarm up six feet of water-pipe before I could hear a word; however, I was a good climber, and if it hadn't been for the cold could have done it easily and thought nothing of it, but it was rather a different matter now. I breathed on my hands for a short time and then commenced the ascent, but just as I reached the top my hands began to lose their power of grasping, I felt that I was going but wouldn't shout to the actors for help; in another moment I must have fallen, but the noble Jones had followed to give me a helping hand if need be, and exactly at the right moment obliged me with my leg up behind; I threw my left hand forward immediately, placed it inside the water-pipe, and drew myself victorious to the top. I now put my head forward towards the window, and just caught the words,—

"Away! and mock the time with fairest show:
False face must hide what the false heart doth know."

Amply repaid for all my trouble, and sliding down the pipe, I gained the ladder and in a few seconds both my friends knew that the play was *Macbeth*. When I had told them I looked at my watch. "By Jove! it's twenty past eight, only ten minutes off prayer time." We put away the ladder with all possible speed, hastened back to the window and found it *bolted!* Whatever could we do, we had but five minutes to take our places in the chapel; we were sure to be missed because Jones used to light the gas. We both instinctively turned to the crafty Robinson: in him lay our only hope.

"For heaven's sake, Robinson, do suggest something," said Jones.

"I have it," he exclaimed, "wait at the cracked gallery window, and then we'll ask some fellow to open it as they pass from the reading room, and take our chance of being caught."

We were delighted with this scheme (it was the drowning wretch's straw); we ran to the window, and Robinson stationed himself at the

crack; two minutes after we had been there the chapel bell rang; one boy always goes up a short time before the master to ring the bell, Robinson saw him passing.

"I say, Smith," he whispered.

"What the deuce are you doing out there?" says Smith, the coolest chap in the establishment, "for God's sake open the window, and I'll tell you afterwards" (I do believe Robinson began to repent his folly, I know I did).

"Well, look sharp and get in; Reeve 'll be up in a minute."

He threw open the window, and we all leapt into the gallery.

"Lor' bless me, how many more are there?" cried Smith, fairly struck aghast.

"That's all, shut the window."

"I can't, my hands are nearly off."

"Never mind that, get into your places in chapel, and stick under the forms till the fellows get in; they 'll see what's up, and won't blab."

We obeyed in silence; the actors came in last, and by that time we were all kneeling in our places, and Jones had lighted the gas. We kept our own counsel, and only took Smith into confidence for his past services.

The next thing to be considered was how to publish the play: now, we wanted to do this in an entirely new and improved style. We agreed to draw lots, and the one upon whom the lot fell was to dodge from the playground on the next play-day, take a train to C——, which was the nearest town to the college, and engage a printer there to print twenty bills like the following:—

On Monday, the 22nd of December,

THE STUDENTS OF ST. JOHN'S COLLEGE

Will have the honour of Performing

THE TRAGEDY OF "MACBETH."

The Principal Character sustained by Mr. J. Harrison.

The lot again fell on me. I discovered that a train left B—— at 11.30. I left the bounds at eleven, and ran to the station, a distance of two miles and a half. I just arrived in time to catch the train, and took a return for C——. Having at length accomplished my dangerous undertaking I returned to the station; caught a train at 1.15, and got safely back to college. Jones was keeping "cave" in bounds when I

attempted to enter: he waited till the master's back was turned, and then said, "Come, quickly."

I jumped upon the wall just as he cried "Cave, cave." The master had turned round, and I was too late: he beckoned to me. I gave Jones a look of reproach, he shrugged his shoulders as much as to say, "I'm very sorry, but I couldn't help it."

When I stood before the master, he asked me were I had been. I replied, "To town." He bade me give up all I had purchased. I had invested a shilling in four cigars on purpose, these I gave him. He asked me if I had anything else. I told him that was all, and waited for the sentence which I knew must follow; it soon came.

"You know, Brown, I presume, the punishment you incur by leaving bounds without permission."

I, of course, remained silent.

"Follow me," he continued.

I mechanically obeyed him. I received the most severe flogging that I ever had in my life; but I bore it without a murmur, for I believed that I had done my duty.

We now waited in anxious expectation for the great day.

At last the time of victory arrived. The eventful day of the 22nd had passed. Night had come, but our bills had not yet arrived. We entered the theatre where the tragedy was to be performed, but what met our horrified gaze? All round the room were pasted twenty yellow bills, two feet by six inches, on which was printed:

On Monday, the 22nd of December,

Brown, Jones, and Robinson,

Will have the honour of Performing a Farce, entitled

"A HORRIBLE SELL,"

The part of the "Dodger" to be supported by

The Celebrated Comedian, W. Jones.

We were horror stricken; grins met us on all sides; our plot had been discovered before we had put it into execution. "Macbeth" was a hoax. Our bills had been intercepted, and others substituted. A sarcastic prologue was recited before the curtain rose, and we had to sit in the theatre, the horrified spectators of "As you like it."

The Genius of Shakspeare.

IMMORTAL Bard! I fain would raise
A song of beauty in thy praise,
And make it equal to its theme;
But how delusive is the dream!
I feel, when thus my thoughts aspire,
How small the harp, how weak the string.
Ah! not for me the golden lyre,—
How can I Shakspeare's genius sing?
The humming-bird may hush and die
When larks are soaring in the sky.

And yet the sweetest bird would fail
Beside the Swan of Avon's dale,
Whose genius, beaming clear and far,
Pales every other lesser star.
How skilfully the soul he drew,
In all its phases bold and free;
He roam'd its dark recesses through—
Deep as the unfathomable sea:
And what a wild and wondrous train
Of fancies revell'd in his brain.

His names are music to the ear,
Macbeth, Othello, Hamlet, Lear;
Shylock, the quaint and cruel Jew,
Ophelia, Desdemona too;
Hotspur, a gallant man indeed,
Well skill'd in arguments of force;
And Richard, offering in his need
To give his kingdom for a horse;
And he who was a host in one,
Falstaff, the witty, fat Sir John.

Behold, the thirty lines are done,
Although my task is but begun;
Yet hosts of authors, full of care,
In thirty volumes might despair
To do him justice: he whose head
Such wonderful creations bore;
Whose works by many a thousand read,
Will bless the millions evermore;
Whose language, though his voice be dumb,
Will ring for ages yet to come.

KEY TO PUZZLES ON PAGES 187—192.

1. Cryptograph.

Who only asks for humblest wealth,
Enough for competence and health,
And leisure when his work is done,
To read his book
By chimney nook,
Or stroll at setting of the sun;
Who toils as every man should toil—
For fair reward erect and free;
This is the man—the best of men,
This is the man we mean to be.

2. Her coachman.
3. Pekin.
4. Madras.
5. Frome.
6. Berne.
7. Abo.
8. Ayr.
9. One-and-eightpence.
10. Hannibal, Napoleon.
11. Wooloomooloo.
12. Dodo.
13. Hammersmith.
14. Pump, Ural, Mate, Plea.
15. Wren, Rope, Epos, Nest.
16. Malt, Area, Lean, Tang.
17. Shot, Hope, Open, Tent.
18. Nose, Oval, Sage, Elen.
19. Palmerston.
20. Your name.
21. Eyemouth.
22. Nelson, Rodney.
23. Culloden.
24. Flodden.
25. Cressy.
26. Edgehill.
27. Intermigration.
28. Conversationalist.
29. Versification.
30. Deliberative.
31. Mismanagement.
32. Inconsideration.
33. Hearthstone.
34. Disembarkation.
35. Indetermination.
36. Heathendom.

37. Cryptograph.

With caution judge of probabilities,
Things deemed unlikely, e'en improbable,
Experience often shows us to be true.

38. Tract, Razor, Azure, Corps, Tress.
39. Anger, Nerve, Green, Evert, Rents.
40. Ling, Iron, Nova, Gnat.
41. New Zealand.
42. Sand-glass.

43. Cryptograph.

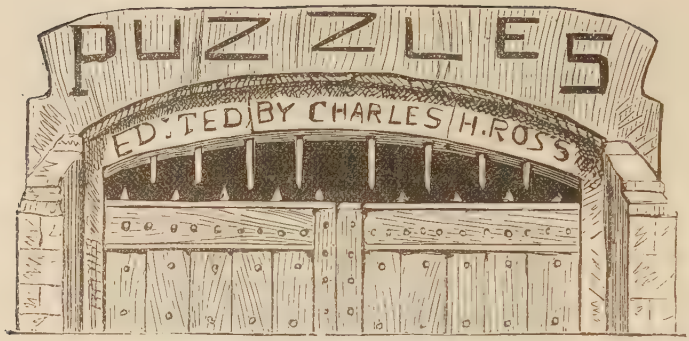
See how beneath the moonbeam's smile
Yon little billow heaves its breast;
And foams and sparkles for awhile,
And murm'ring, then subsides to rest.
This man, the sport of bliss and care,
Rises on Time's eventful sea;
And having swelled a moment there,
Thus melts into eternity.

44. Gladstone.
45. Switzerland.
46. Pantomime.
47. Patriot.
48. Barrow.
49. Miserable.
50. Within.
51. Mild.
52. Hairbrush.
53. Sloe.
54. When it's (s)addled.
55. Patent.
56. Resentment.
57. Contaminate.
58. Shakespeare—*As You Like It.*
59. Inkstand, Steel Pen.

60. Cryptograph.

Full fathom five thy father lies;
Of his bones are coral made;
Those are pearls that were his eyes:
Nothing of him that doth fade,
But doth suffer a sea-change
Into something rich and strange.
Sea-nymphs hourly ring his knell:
Ding-dong.
Hark! now I hear them—
Ding-dong, bell.
Hark! now I hear them—
Ding-dong, bell.

61. Earl of Derby, Lord Stanley.



1.

Cryptograph.

F Prcptferr ! jkpie ret qmct,
Dppk elijp ugi r gfpkmp pvmct !
Cret fu sifqe vprkv ret jvrook qfft,
Cret fu kop dflekrme ret kop ucfft,
Cret fu ik jmipj ! qvrd dfikrc vret
Pre p'pi ledmp kvp umcmrc sret
Kvrk aemkj dp kf kvk iloopt jkiret !

Transpositions.

2. Man ! I do not rest.
3. I sport at no sin.
4. Saves pain.
5. Cooked peas il(l).
6. L ! deep voice.
7. Ma, sent Peter M.
8. Oh chosen precep(t)s.
9. Grim men sat.
10. O man it I cannot.

11.

My *first* is neither warm nor cold,
My next is on the equestrian seen,
My *whole's* a being, I am told,
Renowned for passion, sage, and spleen.

12.

Word Squares.

An English river.
Port in Asiatic Russia.
Irish village.
Town in European Turkey.

13.

English river.
West African town.
Town in Spain.
A conjunction.

14.

Town in France.
Town in Holland.
Liability.
Town of Austrian Italy.

15.

Woman's name.
Group of islands, E. I. Archipelago.
Sicilian City.
One of the Friendly Isles.

16.

A town in Hindostan.
A river in Ireland.
A kind of flag.
A sugar plum.
A town in Scotland.
A flowering plant.
A musical drama.
A town in Jamaica.

The *initials* name a poem, the *finals* its author.

17.

Cryptograph.

Rfs ns xthnjyd nx qnpj f kqtbjw
Gqtbs ns nyx sfynaj qji: ynx ymjwj fgtsj
Mnx kfhzqynyx, jcufsiji ns kzqq gqttr,
Xmnsj tzy; ymjwj tsgd wjfhm ymjnw uwtujw zxj.
Htbujw'x Yfxp.

18.

I consist of 19 letters.

My 6, 15, 2, 14, 11 is a river.
My 17, 15, 5, 3 is an animal.
My 7, 19, 14, 1, 18, 9 is a country.
My 8, 15, 4, 1, 8, 5, 16 is a town.
My 12, 5, 13, 8, 9, 19, 6 is a name.
My 10, 6, 19, 5, 13, 8 is a verb.
My *whole* was a great hero.

19.

A town in England.
Mirth.
To agree.
A town in Palestine.
Birds.
Metal.
A town in Italy.
Denial.

My *initials* will give the hero of my *finals*.

20.

My *first* sits on a lofty seat,
And all to him bend low;
My *second* crouches at his feet,
And fears to rise and go;
My *whole*, resplendent, flashes by
Like a meteor in the sky.

21.

A plaything for boys.
An exclamation.
An article used by painters.
To turn.
A vegetable.
A couch.
A river in England.
Convulsive.
A country in Africa.
To make a show.
To omit.

The *initials* read downwards
Will give the name of a novel,
And the *finals* that of its author.

22.

I am a word of eight letters.

My 7, 5, 4 is a boy's name.
My 8, 6, 7 is a cottage.
My 1, 2, 6 4 is a fruit.
My 7, 5, 3 is a plaything; and
My *whole* is a town in England.

23.

Two naval commanders.

O + nun = all things.
200 + are out = to dress.
101 + gap = A sculptor of the 18th century (curtailed).
101 + ness = unwell.
100 + hoe = resound.
1000 + a rein = abide.

Poets and their works.

24. No Moths—Tom Seyn has no hens.

25. By old roun—Sam E Martins hung them men like dogs, for a vote.

26. Pool L K—Constance went to the death of our friend Lord of Waine.

27. Glen rip—Charles wee is of the little sex.

28.

A poem.
A figure.
A joint.
Cement.

29.

Concretion.
Glassy matter.
A figure.
A mineral.

30.

An entrance.
A fish.
An image.
To stretch.

31.

A book.
A gem.
A heathen god.
Other.

32.

A town in the north of Hindostan.
To imply.
A conjunction.
A snare.
Nothing.
A town in England.

My *initials* will give a novel written by my *finals*.

33.

A god.
A forest (beheaded).
An implement.
A town in Italy.
Harmless.
A sea term.
A town in Ireland.
An interjection.
Impiety.
The head.
A river in England.

My *initials* will name a celebrated statesman; my third letters a commander; and my *finals* an orator.

34.

A town in Spain.
To censure.
Class.
A country (curtailed).
Essay.

My *initials* and *finals* will two celebrated cities.

35.

A town in France.
Part of the head.
A fish.
A relation.
Visual.
A man's name.

The *initials* will give the h fought against my *finals*.

Transpositions.

36. My unit! live again.
37. Call cities aces.
38. Pallid pear pole.
39. Ale, ye rosy men.
40. Ait, O non sunt culti.
41. O go, it's near Peru.
42. 100. O! stir tub on.
43. I ran ten ici H.
44. I soil a post up N.
45. The wee tars.
46. 200. I eat a pear T.

Aronheim and Co. London.

YACHTING.

YACHTING.

MY FIRST CRUISE IN THE "GYPSY."

ENGLISH lads and Englishmen love the sea, and so they ought. Their forefathers were cradled on its bosom, and nursed by the crested waves. The *mal de mer* has no terrors for them, for whether born in a southern county or a midland shire, they long for the time when some long holiday enables them to realize the

"Wet sheet and flowing sea,"

of which Allan Cunningham so musically, if not truthfully, sings. It stirs up the warm blood of the heart, and brings forth big memories of glorious days and weeks of holidays spent by the deep sea, and listening to its roar. What enjoyable hours! what pleasant days were those snatched from busy years and spent in delightful freedom on the Atlantic coast, or in skirting the shores of dear old England. There was that famous cruise from the Nore to Long Ships, during which we made the acquaintance of the creeks and inlets of the whole southern coasts, fishing in strange places, and enjoying ourselves as if life was a maritime idyl, instead of a grand epic poem with a tragedy at the end. What a wonderful three days we had on the Firth of Forth, which was rivalled in beauty and interest on the azure waters of Galway's famous bay. But of all memories, the days of the dashing *Gypsy* are the pleasantest of all. She was not the finest of pleasure-boats, or the largest, or even the best equipped, but she was our own for a time, and we could cruise when we liked, and in perfect freedom. By we, I mean the old Admiral and myself.

I was strangely introduced to her, but the terms were so loving and the affection so great which prompted the introduction, that I have never forgotten them. They formed the prelude of my "first cruise in the *Gypsy*."

A miserable railway journey on a cold raw morning is not an enlivening event, but if a yachting cruise was to follow I would endure the one for the sake of the other at any time.

I had been fishing near Clonmel, and enjoying the hospitality of some warmhearted friends in Tipperary, and I was disconsolate at leaving them. I did not care for the beauties of the golden vale, even if the cold, nipping, raw, foggy atmosphere permitted them to be seen; I was too much engaged in pondering on the length the railway would take me towards Waterford, the "Virgin city," as the inhabitants delight to call it. At this time the railway company had a sort of moveable station, which, as the railroad was finished, was moved onwards to form the terminus: the rest of the journey was performed by those wonderful cars of Bianconi's, provided there were sufficient of them to carry all the passengers; such was not always the case, as I had reason to remember. On this occasion I secured a seat on the arrival of the train at the edge of a boggy morass, over which Dargan, the great Irish contractor, was constructing a wooden bridge at the time.

It was a brief ride to the city, but a picturesque one, by the soft flowing river and the tall rocks that overhang the roadway, until the rumbling, old wooden bridge is reached which leads to the long and lonely-looking quay of the "Urbs Intacta."

Though Waterford is a dull, melancholy-looking place, it is the residence of an old comrade, who has a happy knack of making his friends welcome; but he will persist in calling his pretty suburban villa by some unpronounceable Irish name with a *kill* in it. This old friend I resolved to see, when I was stopped by a loud "top-of-the-morning" salutation, a hearty shake of the hand, an anxious inquiry as to whether I had breakfasted, and whither I was bound. My answers were brief and to the purpose, though in a few minutes I was led off submissively, until I found myself seated in a first-floor chamber overlooking the shipping and the wooded heights beyond, discussing a delightful breakfast, and a still more delightful project of a week's cruise with my old friend and travelling companion, Dick Carleton.

Dick had a peculiar fashion of turning up at all manner of different times and places. His coming was always the signal for merriment, and a general abandonment of care, wherever it might be. He was the prime minister of Fun and Frolic, and what was more, Chancellor of the

Exchequer as well. He was ready for anything. His "breaks" at billiards were astonishing, his luck with the salmon something marvellous, and his hunting feats things to be wondered at; yet, if these were not forthcoming, he would just as readily join the children at beggar-my-neighbour, or the boys at rook-shooting. Here he was in Waterford questioning me in his half joking way as if it was the most natural thing in the world to meet there.

He had a wonderful fund of anecdote to tell me, but vowed he could not and would not tell me until I had promised to join him in the projected cruise. In vain I protested that my holiday had run out, and that I was expected daily at my duties.

"Do you see that?" he cried, as a fine hake came on the table; "I caught that yesterday just at the entrance to the harbour off Hook Tower, in the saucy *Gypsy* out there. Look at her!"

There in the tide-way danced a smart cutter-rigged yacht, small, but graceful as a swan.

"We only ran in last night for stores, and shall start when the tide turns," he continued. "I will call at Stradbally Cove and pick up the old Admiral, so you have no excuse. Besides, your old chum Bill Waters, who was mate of the *Leda* when we came down channel those years ago, is in charge of the *Gypsy* as sailing master, and we have a full equipment of fishing gear."

What a tempting offer! I had promised to spend my remaining week with my old relative at Stradbally, and I knew he would forgive me if we ran in and took him on board. So I agreed, and what fun we had in procuring the stores. How we bargained for tea, sugar, and whisky, not forgetting the famous stout of the Quaker brewers, Davis, Strangman, & Co., for the bluff old mate whom I longed to see again. At length we completed our purchases, and conveyed them on board in the cockleshell yawl belonging to the *Gypsy*.

The sun shone brightly on the dull-coloured stream as I stepped on board and encountered my old friend Bill Waters's tremendous shake of the hand. We soon embarked our stores, and a most extraordinary assortment they were.

"Don't let the porter roll overboard," said Bill, "for the *Gypsy's* not so big as the old *Leda*."

"Take care of the whisky, Tom," said Carleton; "we shall want that ere we reach Dungarvan;" and so I helped to store the bacon, butter, bloaters, and other dainties, and then went back for fuel and bread. It was so strangely different from the old *Leda*, which boasted of a steward and a regular crew; in her one only had to saunter about and

order what we wanted, but here we had to lend a helping hand, for the *Gypsy* was as free as her name, the very enthronement of liberty.

Just as the last parcel was stowed in the cuddy lockers, the tide turned, and our old friend Bill slipped the moorings, and we began slowly to drift by the dockyard and the villas of Johnstown. The light breeze just filled the foresail as we made our first tack, and my heart leaped as the tiny vessel rose and sank on the swell of the tide.

We could hardly enjoy the beautiful panorama which the banks of the Suir present, for we had to haul on board the "wee boatie," to arrange the bunks, order dinner, and prepare to cook it. Still we saw castle and abbey, the wooded slopes, the glorious meeting of the waters of the Suir and Barrow, then the run past Duncannon Fort and Hook Tower, which marks the entrance to the river, and the *Gypsy* began to rise and fall on the heaving waters of the Irish Channel. The wind was blowing gently from the north-east, and we stretched out and gave a good offing. The coast line on the north showed us Fethard, in the neighbourhood of which Mrs. S. C. Hall has laid the scene of many of her charming stories. On the south we opened up the bluff cliffs which guard the entrance to the broad strand of the pretty watering-place of Tramore.

There were only five of us on board the *Gypsy:* Dick, Bill Waters, myself, and an Irish fisherman and his son, who formed the crew. Dick had officiated as cook; and now we were on green water, piped down to dinner; it was not the most sumptuous, but was the most enjoyable of dinners, over which we debated the question of standing out to the Nymph Bank and having a night's fishing, or of running along the coast and picking up the old Admiral. I voted for the latter, and Waters hearing that the proposed chum was a piece of salt junk after his own heart, voted too, and Dick gave his voice also for the project, having visions of a jolly night in the sheltered cove of Stradbally. The *Gypsy* turned her willing head to the sunny south, and we cruised gaily along past the romantic islets of the smugglers, out of which a pathetic novel might be made. Again we tacked windward, and ran close into the Bay of Tramore, where the visitors cheered us as we ran our ensign up to salute them. Out again, for the rocks were white with the wild and chafing waves, which had ground many a good ship to pieces on the same spot. All along the coast are sad memories of the Spanish Armada, which escaped from the prowess of Howard and Raleigh to find a more stubborn foe amongst these hard rocks. The rocks themselves above the sea-spray were bright with gaudy lichens, and studded with sea-fowl. Then we opened up the little cove of Annstown, with

its romantic castle of Dunmore in the distance. Sharply defined on the horizon by its side, we could just make out the triangular monument, mournful in its loneliness, erected to the memory of some gallant mariners "lost at sea."

I began to look out for the fishing-boats, and soon espied the well-known hooker of Bill King, the king of fishermen in these parts. "Heave to, Waters," said I, as we approached, and King dropped along side to trade. A pot of lobsters came over the side in a twinkling, and with a joke about Lotty Veal, Bill's old sweetheart, we went again ahead. On the cliff heads now we could see the tall chimneys of the Knockmahon copper-mines, and beyond the cloudy outlines of the Commeragh mountains. The sun had begun to sink on the other side of Mina Head, as we passed the picturesque strand of Ballyvooney, and ran into the sheltered cove of Stradbally.

A real Irish welcome awaited us at the old Admiral's. What songs were sung, what jigs were danced, what stories told, I cannot now describe. By break of day we stretched southward to the Nymph Bank, and had a famous haul of fish. At night we ran into Dungarvan, where we exchanged our fish for more stores, and spent the night outside the harbour, where the songs of the old Admiral kept the crew of a large homeward-bound barque, moored near us, in a continued roar of laughter. The next day found us at Youghal, renowned for Sir Walter Raleigh and his potato-planting. We visited the remains of the old abbey, and sauntered along the estuary of the Blackwater ere we started for Queenstown. The attractions of this splendid harbour, and the beauty of the river to Cork, I need not describe. We saluted the Royal Western Yacht Club as we left, which was duly acknowledged, and after a long stretch to the old Head of Kinsale, the old Admiral voted for home. There was a strong sou'-wester brewing he pointed out, and it would be far better to be high and dry in Stradbally Cove than to be pent up even in the beautiful harbour of Cork. The dashing *Gypsy* spurned the waves as she dashed forwards on her homeward course. The heavy swell was setting in from the Atlantic before we passed Mina Head. At ten o'clock we made the old cove with the tide, and ran the *Gypsy* up the river, out of reach of the storm king, who speedily vented his rage on the ironbound coast without.

The *Gypsy* was well known in Stradbally Cove after that, but I little thought at the time that in the old churchyard above, there would sleep the darling of my heart, a dear sweet little gypsy, whose cruise of life was as short comparatively as the one I have recorded.

Stephen Scudamore the Younger;

OR,

THE FIFTEEN-YEAR-OLDS.

A STORY OF BOYS' ADVENTURES AT HOME, ON BOARD A PASSENGER SHIP, AND ON THE AUSTRALIAN GOLD-FIELDS.

By ARTHUR LOCKER.

PART III.

CHAPTER III.

How Prawle contrived to get on the Ship's Articles.—Discovery of Passengers who hoped to get to the Gold Diggings for nothing.—Stormy weather in the Irish Sea.—Singular scene between decks.—Purser's work on board an Emigrant Ship.—Serving out Stores.—Mr. Cripps's "bulling" a Cask.—Jackson, the discontented Policeman.—A Row on the Forecastle.—Striking the Captain.—Births and Deaths.—Mr. and Mrs. Fish.—"No Smoking allowed."—Prawle promoted.—What one sees at Sea.—The Mysterious Screw-steamer.—Land ho!—Arrival in Hobson's Bay.—A runaway, a chase, and a capture.—The Blue-light Adventure.

PRAWLE was not surprised to see me, but I was very much surprised to see him; in fact, I was so astonished that I let a bar of marine soap fall upon Mr. Hennessy's toes. It was lucky that it was not anything heavier than soap, or he would most likely have boxed my ears, for he was a hot-tempered fellow. As it was, he took it very good-naturedly, and merely bade me be more careful for the future. Prawle made signs that I should take no notice of him, and after asking the mate very respectfully if he had any further orders, walked away. When we had finished our work in the store-room, which was situated in a house on deck provided for the second-class passengers, Mr. Hennessy and I had supper together; and then he told me that I could do what I pleased till four bells struck—that is, till ten o'clock—when I had better turn in. I ran away to the main deck, looking anxiously about me. Presently

somebody laid a hand on my shoulder. It was Prawle. We strolled to the bulwarks and stood leaning over them, gazing at the glittering lights of the town of Liverpool. My friend then told me his story.

"As soon as I knew that you had made up your mind to go to Melbourne, Stephen, I determined to go too. I had an interview with Captain Staunton: he told me that he couldn't take me except as a passenger. Now the cheapest passage in the steerage is sixteen pounds, a sum of money which I had no chance of raising. 'Can't I ship as a sailor, sir?' I asked.

"'I've got as many boys on board as I want,' he answered.

"'I wish you'd take me, sir. My father was a sailor, and I want to be a sailor too.'

"'Let me see, what's your name?'

"'John Prawle, sir.'

"'I served as second mate once under a Captain Prawle,' said Captain Staunton.

"'A short red-faced man, sir?'

"'Yes.'

"'That was my father, sir.'

"'He was a regular Tartar,' observed Captain Staunton.

"'So he is still, sir,' I replied.

"Whereupon the captain burst out laughing, and said—

"'Come now, my lad, you don't want to be a sailor, you want to go to the diggings; isn't it so?'

"'Yes, sir.'

"'Very well. I'll ship you at a shilling a month for the passage. You must sign the articles, and do your duty like anybody else.'

"I accepted the terms, Stephen, and here I am."

"But how did you manage to buy clothes, and so on, Prawle?"

"Well, I disposed of all my superfine wearing-apparel to a Jew in Park Lane, keeping one suit for the colonial Sundays, and with the cash I received and my last month's allowance of pocket-money, I contrived to buy my seafaring kit. I tried to borrow a pound from my uncle, but the stingy old hunks only lent me three and eightpence. At the present moment, Stephen, I am worth fourpence halfpenny in copper money, but my heart is light, and with my parting breath I hurl defiance at the firm of Hailes, M'Gaffney, & Co!"

As he said these words, Prawle made a "long nose" in the direction of Goree Piazzas.

"Won't your father be very angry?"

"Won't he? If he knew I had run away, he would be capable of

chartering a steamer out of his next quarter's pension and starting in pursuit. I've written to my mother, but I shan't send the letter till the pilot leaves us."

"And what will she say?"

"She'll take it easy. She doesn't believe in the splendid advantages to be obtained from a residence under Mr. M'Gaffney's roof. My father does. He's just such another old flat as your father, Stephen."

"Thank you," said I, drily.

"And now, Stephen," continued Prawle, "you won't be ashamed of me, will you, because I wear dungaree trousers and scrape the decks, while you mess with the swells of the second cabin?"

"Of course I shan't, old fellow."

"That's right; because, you know, you'll be a valuable friend now, Stephen. When I wish to vary the monotony of salt pork and salt horse with a handful of raisins or a herring, I shall apply to the Deputy-Assistant Storekeeper-General, eh? There's four bells striking. Don't you envy me in the forecastle: it's like the Black-hole of Calcutta. Good night."

Mr. Hennessy and I had a snug little room to ourselves in the second cabin. It was originally intended for four berths, but two had been pulled down to afford us accommodation for cigars, spirits, and such-like choice stores as required to be kept under special lock and key. I slept pretty well, but turned out with Mr. Hennessy at four o'clock in the morning, and went on deck.

Almost all the passengers were asleep in their berths below, nevertheless, something remarkable was evidently going on. Mr. Weekes, the chief mate, was standing by the main hatchway, and I observed that the hatch of the lower hold had been removed. Mr. Weekes was a tall bony man, with a long leathery face and a tremendous voice. He was shouting some instructions to the carpenter and boatswain, who were groping about in the hold with lanterns in their hands.

"Bring 'em up, bring every one of 'em up. Fetch me the irons, Mr. Robb" (this was addressed to the second mate); "I'll put 'em all in irons till the steamer comes alongside."

"Now then, Scudamore, don't stand staring there, the cooks are waiting for their stores," exclaimed Mr. Hennessy, sharply.

Away we went to the store-room, and presently delivered to the cooks a quantity of tea, coffee, beef, pork, and other provisions.

"No measuring or weighing to-day," observed Mr. Hennessy, "we must go by guess. When we are out at sea we shall do things differently."

When I got back to the main deck, about an hour afterwards, I saw an extraordinary sight there. Five miserable half-starved fellows, dressed in the most wretched rags and tatters, sat on the deck, all of a row, with fetters on their hands and feet. Mr. Weekes stood leaning against the mainmast, contemplating them with a grim smile on his face.

"Are these convicts going to Australia, Mr. Hennessy?" I whispered.

"Poor devils!" he replied. "I dare say they wish they were. No; they are stow-aways, people who have hidden themselves among the cargo, in hopes of getting a passage for nothing, but Mr. Weekes has ferreted them out, and they'll be all sent ashore again."

I felt very sorry for these poor creatures. As soon as the tug-steamer arrived, their fetters were knocked off, they were put into a boat and rowed ashore. It seemed so melancholy to think that the greatest punishment they could undergo was being sent back to the shore of old England, which, to most of us, now that we were leaving it, seemed such a cozy comfortable place. For days after I seemed to see their doleful, pinched, hungry faces, as the watermen rowed them towards the stony-hearted streets of Liverpool.

Off Formby lightship we cast the tug-boat adrift; our sails were unfurled, and Captain Staunton took the command of the vessel. The wind was strong and adverse. The waves began to rise angrily, and most of the female passengers hurried down below.

"They won't want many stores to-day, Scudamore," said Mr. Hennessy laughing grimly.

I did not laugh in return, for the pitching of the vessel began to excite uncomfortable sensations in my stomach; but I did not suffer for very long. I had got over the real deadly sea-sickness when a schoolboy in the Lempriere House boat; besides, my storekeeping duties gave me constant occupation, and allowed me no time to grow qualmish.

Poor Prawle, though the son of a sea-captain, was not thereby exempted from the attacks of the deadly foe. During the course of the day I saw him hanging over the ship's side with an expression of comic agony on his wobegone countenance. His complexion remained as red as ever, so that nobody would believe he was sea-sick.

"I say, Stephen," he said, turning on me a pair of dolorous goggle-eyes, "the boatswain swears I'm shamming, and threatens me with the rope's end, the unfeeling monster, just as if my poor head wasn't all mops and brooms."

He then burst, but in a very feeble manner, into song:—

"Oh, the sea! the sea! the o-o-o-o-pen sea!
The ever fresh——

Ugh! ugh! I almost wish I was back at Goree Piazzas, or at Mrs. M'Gaffney's festive board. One always had an appetite there, Stephen; whereas here——ugh! ugh!"

The south-west breeze freshened into a regular summer gale, and for two or three days we were knocking about St. George's Channel, beating down slowly towards the Atlantic and alternately sighting the Welsh and the Irish coasts. This was rather a miserable time: everything on board the ship was in disorder, and the weather was far too rough to allow us to "break" anything out of the hold. The scene between decks was extraordinary, and almost defies description. Probably not one in thirty of the passengers had ever been on ship-board before—many of them indeed had never set eyes on a ship until their arrival in Liverpool—and they had no notion of making any preparations against the inconveniences caused by the rolling and pitching of the vessel. They fancied, poor simple souls! that if they placed an inanimate object, such as a box or a bag, in any given place, it would stay there. Consequently, when we peeped cautiously between decks, sea-chests, boxes, tin dishes, lamps, chairs, &c. &c., were flying backwards and forwards as if engaged at a game of supernatural leapfrog, while, with pale terrified faces, the unlucky inhabitants peered out of their berths too sick and frightened to move. Every now and then a box would burst, from the violence of the concussions which it received, and then clothes, tools, books, and all sorts of goods and chattels were scattered over the cabin. I believe if at that time Captain Staunton had said "Shall I return to Liverpool?" most of the passengers would have eagerly answered "yes!" though perhaps in a few days they would have growled at being taken at their word. During these two or three days we storekeepers had a slack time of it, for nobody, except the sailors, had any appetite, and those of the passengers who were able to nibble a little had provided themselves with private stores of such delicacies as cheese, butter, and bacon, which they naturally preferred to the food supplied by the ship. But when the gale had blown itself out, and was succeeded by a gentle easterly breeze and a bright blue sky, everybody began to revive. Even the women crept on deck, and seeing the Cornish coast looming on our larboard quarter—it was our last sight of English land—some of them inquired very gravely if that was Africa, and were quite disappointed to find that after several days of unutterable misery, they were still within a few hours' railway journey of the place from which they started.

I shall now endeavour to describe our vessel, the number of passengers, the nature of my duties, and, lastly, to give some account of the

incidents which took place during the passage. The *Ruth Hayward* was a full-rigged ship of 1,000 tons register, carrying in her lower hold a cargo of salt, which she was to take on from Melbourne to Calcutta, but otherwise entirely devoted to passengers and their stores. We carried water and provisions for twenty-two weeks, although we hoped to make the passage in less than a hundred days. There were on board nearly four hundred persons, about seventy in the steerage or lowest class—their berths were in the bows of the vessel—two hundred in the intermediate, who were also lodged between decks, about sixty in the second cabin, which consisted of a large house on deck, after the American fashion, and about a dozen in the chief cabin. The officers and crew numbered fifty or sixty persons. Mr. Hennessy's duties were of two kinds. He had to serve out the regular allowance of provisions to the passengers, and to sell certain extra stores to such as chose to buy them. Now, a purser is usually a well-dressed gentleman, who never soils his fingers by touching the provisions, and who sits all day in a little den of an office keeping mysterious accounts. This sort of purser may answer on board a mail-steamer, where the passengers are few in number, and where the provisions are supplied ready-cooked. But on board a merchant ship like the *Ruth Hayward*, carrying emigrants for the first time in her life, and where, consequently, all hands, officers, cooks, and passengers, were equally inexperienced, the purser must strip off his dandy coat, and go to work in earnest. He must descend into the depths of the hold, and penetrate the mysteries of the cook's galley. As for my post, it was no place for glazed boots and kid-gloves. My week-day costume consisted of an old wide-awake hat, a pair of canvas trousers, and a blue jersey, and these used to get pretty well besmeared with flour and molasses. The chief cabin and the second cabin were easily managed, as their respective stewards took their provisions in a lump, and served them out ready-cooked, but the passengers between decks were divided into messes, usually consisting of eight persons each, and each mess was expected to choose a captain, whose business it was to come at the appointed hour for his supply of stores. These messes used to fight and squabble dreadfully among themselves, their captains were always being deposed and re-elected, but at last Mr. Hennessy got them into working order. My work was pretty severe. Mr. Hennessy roused me at half-past five. We then served out stores till breakfast-time, and again after breakfast till twelve. At twelve o'clock we ceased serving out stores, and opened shop for an hour, during which time we sold ale and porter, wine, tobacco, cigars, and sundry other articles. During the voyage we disposed at our diminutive counter of nearly £800 worth

of goods, and a great deal of the money received was copper, which we kept in buckets in the captain's cabin. In the afternoon there was more serving out of stores. Shop again from five to six, and then, after tea, I used to help Mr. Hennessy with his accounts till eight or nine o'clock. Even on Sundays we were obliged to keep shop as usual, but no stores were served out. Although the hours were long for a lad of fifteen, there were a good many breaks. Most of our work was done in the open air, and I enjoyed every scrap of leisure with a zest which an unemployed person cannot feel. The passengers often used to say, with a weary yawn, "I wish I were in your shoes, young fellow. You are always busy, and always happy."

The stores were served out on the main deck. I collected the tickets and called out the amounts, Mr. Hennessy weighed the quantities in a large pair of scales, and Cripps, of whom I shall speak again presently, shovelled the articles out of box, bag, or cask, as the case might be. In fine weather, barring occasional rows with nasty-tempered passengers, this work was pleasant enough; but when we got into the high southern latitudes, with a strong breeze blowing, a heavy sea rolling, and the deck slippery with salt-water, or half-melted snow, some curious scenes used to occur. Sometimes when the ship gave a more than usually heavy roll, all the passengers who were waiting to be served would come flying, against their will, across the deck, knocking over weights, scales, provisions, purser, and assistants. Mr. Cripps used to get very wroth at being capsized in this summary fashion, for he was a veteran seaman, and could not excuse anybody for losing their footing, however rough the weather might be. So he used to rise out of a confused heap of heads and limbs, hitting out lustily with his clenched fists, without mercy, at everything that came in his way. Cripps had been a master of a vessel in his day, but, in his old age, had come down in the world, and was now glad to get some reduction made in the price of his passage money—for he was going to settle in Victoria with his wife and children—by acting as a sort of scrub under Mr. Hennessy. He was a most honest, handy old fellow, and might have been safely trusted with bags of gold and silver, but not with grog. One day, I remember, Mr. Hennessy and I had been bottling off a barrel of whisky. As soon as the job was done, old Cripps got hold of the empty barrel, saying to me, "Look here, Mr. Scudamore, I'll show you how to make a 'bull' of this." He took out the bung, poured about a quart of water into the cask, replaced the bung, and then perseveringly rolled the cask about the deck for half an hour. The result of all this shaking was that the water became strongly impregnated with spirit, and that, when Mr. Cripps'

services were required later in the day, he was discovered fast asleep and snoring upon a bag of biscuits under the main hatchway, with an empty bottle at his side. I spoke, just now, of rows caused by disagreeable passengers. When we first began serving out stores there was a general impression that Mr. Hennessy would, if he could, cheat the people out of their allowance, and some of them used to bring weights and scales of their own on deck, as a check against us. After a few days, however, most of the passengers discovered that Mr. Hennessy was scrupulously honest ; they soon ceased to trouble themselves about the scales, and trusted us implicitly. The only exception was a man named Jackson, a very tall, thin, lantern-jawed Irishman, who had been, it was said, a Liverpool policeman. His wife was always below, being continually sea-sick, and Jackson was perpetually stalking about the deck with a long-legged twin-child on either arm. He was a most attentive nurse, but a terrible grumbler, for every day he swore that he had been cheated out of his allowance. Mr. Hennessy cured him in this manner. He compelled him to watch, most narrowly, the operation of weighing every one of his articles, and before three weeks had passed Mr. Jackson was so tired of the job, and so jeered at, and sneered at, by his impatient fellow-passengers, that he never again opened his mouth, and became as meek as a lamb.

Considering the number of passengers we had on board, that most of them were entire strangers to each other, and that they came from all parts of the United Kingdom, we had not much squabbling or fighting, except in the messes. This was greatly owing to Captain Staunton's good management. He was a fair-dealing, just, kind-hearted man, always ready to listen patiently to any complaint ; but when he put his foot down, as the Yankees say, he was resolved to be obeyed. There were two Roman Catholic priests on board, and they asked to be allowed to celebrate mass, on Sunday, in the second cabin. Captain Staunton granted the permission, but presently they complained that some foolish fellows came and made fun of their religious observances. The chief mate was ordered to keep watch ; he caught two of the ringleaders, and they were put in irons for the whole of the following afternoon. The service was never again disturbed. It was rather curious that while almost all the Irish on board were zealous Protestants from Ulster, the Roman Catholics were nearly all Englishmen from Preston, in Lancashire. Another disturbance was rather more serious. The intermediate passengers were very jealous of the second cabin ; because the latter were allowed the privilege of walking on the poop, from which they were debarred, and in return they used to declare that no cabin

passengers had any right on the forecastle. One beautiful moonlight night, after we had entered the tropics, a number of Northumberland men were celebrating a birthday in the forecastle, drinking toasts and singing songs. Some of the second cabin passengers went forward to see the fun. The Northumberland men refused to let them come on the forecastle, and when some of them persisted in climbing up, they were summarily pitched on to the main deck, receiving some cut heads and bruises from this rough usage. They at once came aft, and summoned their fellow-passengers to assist them. Presently a regular scrimmage began. The second cabin, forty or fifty strong, endeavoured to dislodge the Northumbrians from their fortifications. Sticks were freely used, and bottles thrown about. The row grew so serious that Mr. Hennessy bade me run down to the chief cabin and call up the captain. In a few minutes I saw his gigantic form—he was a head taller than any of the combatants—stalking calmly into the thick of the fray. At sight of the skipper most of the faction-fighters turned and fled; but one man, in the heat of the struggle, absolutely struck Captain Staunton a violent blow in the chest. I saw the deed with my own eyes, and regarded the offence as little short of high treason. The captain dragged out the offender by the collar of his coat, though he was a good-sized fellow, as easily as a mastiff tackles a bull terrier. I verily expected to see a line run up to the yardarm, and the criminal swung in the air. The captive turned out to be a rather silly, but gentlemanlike young fellow who went by the name of Midshipman Green, because he had formerly served aboard a vessel belonging to the shipowners so named. This made his offence worse, for, as a seaman, he must have known how serious a crime it is to use violence to a commanding officer. But as he appeared extremely penitent, vowed that he only hit out at random in the heat of the fray, and that he would not have struck Captain Staunton, knowingly, for all the gold in Australia, our worthy skipper dismissed him with a reprimand, and returned, with a placid smile on his broad face, to the charts which he had been consulting down below.

Half a dozen children were born on the passage,—one of them, I recollect, was christened Indiana Marina, because she came into the world when we were crossing the Indian Ocean,—and three or four persons died. Mr. Hennessy, who was a man of superior education, used to act as chaplain on these occasions. I remember one Sunday, the people had preserved meat for dinner, and as they had a difficulty in opening the tins, Mr. Hennessy was doing it for them with one of the peculiarly-shaped knives used for the purpose. He was dressed in his working costume—a blue serge shirt and a pair of dirty duck

trousers. Presently a message came from the captain that he wished the funeral—it was that of a young woman—to take place at once, as the barometer was falling, and a gale of wind likely to come on. Hennessy immediately ran away to his cabin, and reappeared ten minutes afterwards dressed in a suit of decent black, with a prayer-book in his hand. He then read the service with great feeling and reverence. Such ceremonies are obliged to be performed rapidly on board ship. On this occasion, the poor girl's body had scarcely been committed to the deep, when Captain Staunton shouted, "Stand by the main-top-gallant halyards," and presently afterwards a heavy squall burst upon us.

We were very fortunate in escaping all contagious sickness. There are two calamities which are far more to be dreaded on board ship than storm and tempest, and these are—epidemic disease and fire. As for the latter, the wonder to me is, not that ships are sometimes burnt, but that so many escape burning. Athough naked lights are strictly forbidden between decks on board passenger ships, the rule is constantly evaded. It is so pleasant in cold rough weather to lie reading in your berth; and the oil-lamps provided by the ship are generally most wretched glimmering affairs, barely making darkness visible. But what the terrors of Mr. Weekes's big bullying voice were unable to accomplish, was effected by the ingenuity of one of the passengers. He perceived that nearly everybody on board was provided with candles, but that very few possessed lamps. Being a tin-plate worker by trade, he hastened to remedy the defect; and, by the aid of some sheets of tin which he had in his chest, and some white glass spirit-bottles, he constructed a number of convenient lamps, which sold very readily after being submitted to the captain's approval. Tobacco-smoking is another practice which is supposed to be forbidden between decks: but the rule was constantly broken. I have seen a half-tipsy fellow staggering about between decks with his lighted pipe turned upside down, so that at every few steps he dropped particles of red-hot tobacco. I have seen another man, out of sheer carelessness, throw a lighted match behind a box: on the box being pulled out from its place, a heap of dry straw was found between it and the cabin-partition, all ready for taking fire. The chief mate, Mr. Weekes, and the doctor, Mr. Salter, were very particular about cleanliness, and I have no doubt this saved us from fever and other contagious diseases. Every passenger was furnished with an iron instrument called a scraper, with which he was expected to scrape the floor round his berth; and if this was not done to Mr. Weekes' satisfaction, he used to forbid the cook to issue any

breakfast to the passengers. You can fancy how savage the hungry passengers between decks used to get, when they found that they could not obtain a drop of tea or coffee because, perhaps, one lazy fellow had neglected his scraping. In such a case, the delinquent either received a good pummelling at the hands of his shipmates, or, if he was really incapacitated by sickness, somebody else would undertake the job, for the sake of getting his own breakfast.

Mr. Salter was equally particular in compelling all the passengers to bring their beds and bedding on deck directly after breakfast, except when the weather was bad. The doctor had made several voyages on board the New York emigrant-ships, was a strict disciplinarian, and kept everybody in excellent order, except one couple, of whom the whole ship, including even Captain Staunton himself, stood in mortal terror. Mr. Fish was a middle-aged man, lean and sunburnt, who always dressed in the colonial fashion, wearing a blue serge shirt and a cabbage-tree hat; Mrs. Fish, his wife, was a stout lady, with a broad, coarse face, who looked more like a man than a woman. In rough weather, she wore a pea-jacket, and used to be fond of leaning against the big water-tank, with her legs crossed and her arms folded, puffing away at a short black pipe, and gossiping with the sailors. It was reported that Mr. Fish had been transported for life, that he had secretly visited England to inquire about some property, and was now returning to his adopted country. I hardly know why Mr. Fish inspired such terror, for he was a silent and reserved man, except it was that he had a way of mysteriously threatening to "do" for people when he got ashore, which was decidedly unpleasant, for we greenhorns naturally thought that perhaps everybody in the colony belonged to the Fish tribe. Several times he threatened Mr. Hennessy's life and mine, and he knew how to overcome Dr. Salter. He once came to our store, saying:—

"My old woman's very bad in her inside, and when she's bad in her inside, nothing will cure her but brandy and pepper."

Mr. Hennessy replied civilly, for, as he was going to settle in the colony, he had no desire to make an enemy of Mr. Fish: "I can give you the pepper, but I can't sell spirits to a third-class passenger without an order from the doctor."

Mr. Fish went away, obtained the order, and whenever Mrs. Fish's pain returned, which it did every few days, he always applied for the same remedy. Don't let me accuse Salter of cowardice. Even Captain Staunton, though a giant in stature, allowed that he trembled before Mrs. Fish. As I have already observed, the doctor was very severe in

prohibiting smoking between decks, and in compelling everbody to turn out of their berths and roll up their beds at seven a.m. Yet one day, Mr. Hennessy and I, who were busy "breaking out" stores from the hold, overheard the following dialogue :—

Salter. "Mrs. Fish!"

Mrs. F. (*in a deep masculine voice*). "Hallo! doctor."

S. "You're in bed, Mrs. Fish."

Mrs. F. "I know I am, doctor."

S. "It's against the rules, Mrs. Fish."

Mrs. F. "I don't care if it is, doctor."

S. "And you are smoking, Mrs. Fish."

Mrs. F. "I know I am, doctor."

S. "You must put out your pipe, Mrs. Fish."

Mrs. F. "I shan't, doctor."

And then we heard poor Salter steal softly away without another word, followed by a derisive chuckle from the fair lady inside.

I have not said a word all this time about my friend Prawle. I don't think, if he had remained at sea, he would have been likely to make a first-rate seaman. But he assured me that it was impossible to get up any enthusiasm for the nautical profession on such wretched nominal wages as a shilling a month.

"When we go aloft," he said, "to shorten sail, you won't find me stretched out on the yardarm, because I might drop into the sea, and so lose my valuable life. I take care to remain in the 'slings,' and if I drop out of them, I charitably hope I may drop on to the boatswain and bruise him severely. He is very cruel to me, Stephen; he is prejudiced against my long legs, and he insults the rubicund tint of my complexion by calling me 'Butcher.'"

I suspect the boatswain thought Prawle a bit of a humbug; for one day, when we were all hauling-in the mainbrace, and Prawle was shouting "Hey, ho, cheerly men!" at the top of his voice, I heard the boatswain say, gruffly, "Less noise and more work, Butcher; you're not pulling an ounce."

But after a time poor Prawle was appointed to more congenial duties. When we got into the hot latitudes, and the people grew thirsty, great complaints arose as to the manner in which the water was served out. Every one had a right to three quarts a day, the greater part of which, however, went to the cook for making tea and coffee. As for the remainder, people declared that some got far more than their share, and that some got none at all. Angry deputations visited the captain on the quarter-deck, and he promised that the abuse should be set right.

In the course of the day, Prawle went aft, and respectfully touching his cap, presented a paper to the captain. It was a neatly-compiled statement, showing the exact amount of water due to each mess or family throughout the ship, after the cook's allowance had been deducted. Captain Staunton sent for Mr. Hennessy, and handing him the paper, asked him if it was correctly drawn up. Mr. Hennessy examined it carefully, and replied that it was.

"Then give that lad Prawle," replied the captain, "the key of the water-tank; we'll see if he can give the passengers satisfaction."

At first there was a great deal of grumbling; but when they saw that Prawle was determined to treat everybody fairly, they became more satisfied, and he retained his post—Chief Controller of the Pump-handle, as he styled himself—until we reached Melbourne.

I am inclined to think that tales of sea life and adventure, especially those which are expressly written for boys, convey very false impressions of the reality. The writers of such books don't perhaps relate anything that never actually happened, but they crowd into the story of one voyage all the wonderful experiences of a hundred voyages. The consequence is that when boys go to sea for the first time, they are disappointed to find how few wonderful things there really are to be seen. The outward incidents of the ninety days on board the *Ruth Hayward* may be dismissed in a few lines. Sometimes a shoal of flying-fish rose athwart the bows of the ship; and once—I think only once—a solitary specimen fell on the deck, and lay flapping there, unable to rise. We saw a good many porpoises in the Bay of Biscay. I like to watch the fat black oily rascals tumbling head over heels, they seem so full of enjoyment. Now and then we saw a distant whale spouting, and once we spied a great turtle swimming along—I saw him through Mr. Hennessy's telescope.

In the high southern latitudes animal life becomes more abundant. A flock of albatrosses, mollyhawks, and Cape pigeons follow the ship perseveringly, although the guns of the passengers are perpetually wreaking death and destruction among them. It seems a shame to kill these poor creatures, for we had no retriever dogs on board, and even if we had, the captain would scarcely have stopped his ship to allow some Cockney sportsman to secure his booty. I have often been surprised to think of the distances which such birds as the albatross can fly without fatigue. When a ship is "fluking" along before a westerly gale at the rate of 250 or 270 miles a day, these birds keep deliberately circling round and round her, accomplishing at least twice her distance in the same length of time; then they quietly perch on a

wave, put their heads under their wings, and go to sleep for the night. Once or twice we caught an albatross with hook and line. Their immense size and stretch of wing astonishes the person who for the first time sees them close at hand. When they are flying around the ship they look comparatively small; but in the open sea the eye is easily deceived about size and distance. As for the Cape pigeons, everybody has heard, over and over again, how the poor creatures become sick the moment they touch the deck, and how they vomit pure oil from their stomachs. In these latitudes the black-fish, a small species of whale, is found. We once fell in with a whole "school" of them. It was really a striking and magnificent sight to see thousands of these great creatures jumping out of the water, and performing all sorts of acrobatic antics on every side of us. I will only mention one other incident. We got rather close in to the eastern coast of Africa, near Cape de Verde, and were becalmed there for three tedious days. During the calm a vessel hove in sight on the extreme edge of the horizon.

The captain pronounced her to be a screw-steamer. She vanished when night came on, but the next day reappeared on the other side of us, so much nearer that we could read signals with a telescope. Captain Staunton hoisted his number, but the stranger made no response. As she kept standing off and on in rather a peculiar way, and as there was not a breath of wind to stir our sails, Captain Staunton grew a little uneasy. He ordered the brass three-pounders—intended for ornament more than use—to be loaded and shotted, and he bade the carpenter take down and put in order a dozen old-fashioned fowling-pieces and cutlasses that hung round the chief cabin. Now, if I were relating a romance instead of a literal transcript of my own adventures, I should go on to describe how the stranger drew cautiously nearer and nearer, how she at length fired a shot across our bows; how we returned fire with one of our pop-guns—which only carried a couple of hundred yards, how the stranger hoisted a black flag with a death's-head and cross-bones on it, and lowered a boat full of armed men; how, just as they drew alongside, we judiciously dropped a round shot out of the mizen chains and sunk her to the bottom; lastly, how a breeze sprang up and we sailed triumphantly away. Such a yarn as this was related only a few months ago in the *Times* newspaper, and professed to be the genuine experiences of a passenger between London and Melbourne; but as I never heard anything more about it, I suspect it was a hoax. In our case you may fancy that the passengers, especially the women, got terribly alarmed, and made up their minds that they would be murdered

and thrown into the sea by those bloodthirsty pirates. But no such tragical events happened. On the second evening the mysterious stranger was still in sight; but next morning she had disappeared, and we never saw her again.

Now what was she, and why did she advance and retire as if she were setting to us in a great nautical quadrille? I cannot satisfactorily answer these questions; but I remember hearing that Captain Staunton pronounced her to be a slaver waiting for an opportunity to make the coast, but afraid of the British squadron. Perhaps at first she took us for a man-of-war, then afterwards, on discovering her mistake, she amused herself by trying to frighten us in revenge for our having frightened her. I have sometimes wondered that no daring pirate has ever attempted to surprise a homeward bound Australian clipper laden with gold. Such a vessel would form as rich a prize as one of the Spanish galleons coveted in the sixteenth century by Drake and Frobisher. I suspect that the security of ships in modern days is caused thus: it would be easy enough for a well-armed screw-clipper to plunder a poor defenceless merchantman, but what would be the use of the plunder? Pirates must go somewhere ashore to enjoy their ill-gotten gold, and wherever they went in these days they would be liable to capture. They would be placed in the same difficulty as the Confederate cruisers during the late American war—they would have no port open for their prizes.

Though we had traversed half the circumference of the globe, we had sighted no solid earth since our last view of the rocky coast of Cornwall, with the exception of a distant glimpse of the peak of Teneriffe, which to my landsman's eyes looked more like a cloud than a mountain. I was delighted, therefore, one September morning to be aroused by shouts of "Land ho!" I hurried on deck, and though the day was only just breaking, found an eager line of passengers already leaning over the bulwarks discussing the outward appearance of the country where they all hoped to make their fortunes. I was surprised to find our good ship so close in shore. The coast was not more than a mile distant, and with yards sharply braced up we were standing right in. Presently Captain Staunton gave the signal to 'bout ship, and then some of our wiseacres declared that he had only just discovered the perilous position in which we were placed, and that in a few moments more we should have been upon the rocks. Mr. Hennessy afterwards explained to me the truth of the matter. The land before us was Cape Northumberland, just on the frontier line between South Australia and Victoria, a favourite point of approach for navigators making the Australian coast,

just as the Start Point in Devonshire is frequently the first landmark of homeward-bounders. During the night the fair westerly wind which we had carried for weeks had fallen light and dropped into a calm. This was succeeded by a light breeze from E.S.E.; consequently we were no longer able to keep on our course, but were obliged to beat to windward, and we had just completed our allotted shoreward tack, when Captain Staunton gave the order to go about. Of course we "new chums"—and nearly all the passengers on board the *Ruth Hayward*, except Mr. and Mrs. Fish, were new chums—of course we all looked with great interest on the first bit of Australian land. We were rather glad to find that it did not look at all like the white cliffs of old England. The shore was high and bluff, of a dark red colour, and trees and thick bushes grew down to the very edge of the cliff. No trace of any human habitation was visible, but this did not prove that the country was untenanted by civilized men. On a certain occasion a ship-captain who had never visited Australia before, landed on this coast to see if he could obtain any meat, as his barrels of beef and pork were almost expended. He saw no signs of human beings, but discovered a flock of fine fat sheep. Regarding them as animals providentially placed in an uninhabited region for the benefit of poor hungry mariners, he shot several of the "woolly birds," as he called them, and carried their carcases triumphantly back to the ship. He was rather astonished, upon his arrival in Melbourne, to find that the news of his raid had got there before him, and that an action for damages had been entered against him in one of the law courts. The shepherd in charge of the sheep had witnessed his high-handed proceedings, but being afraid to interfere with a party of armed men had hidden himself, and reported the robbery to his employer.

After a three months' passage, during the latter part of which we had encountered light baffling winds, we reached Port Phillip Heads. The appearance of that now celebrated inlet was not very cheering. The coast was barren, treeless, and forbidding; while the reefs on either side of the entrance—for the actual passage is not more than a mile in width—were ornamented with the skeletons of several unlucky vessels which had stranded there. When the pilot came on board, everybody crowded round him to hear the news. The chief news was that a new gold-field of extraordinary richness had been discovered on the Bendigo Creek. Next day we proceeded up the port—a fine basin of water forty miles across, and anchored in Hobson's Bay, at a considerable distance, however, from the shore, for fear any of the crew should desert. One of the first sights, indeed, which met our eyes, was enough to

strike terror to the heart of a master-mariner. Before us lay a whole fleet of noble merchantmen, without any sailors on board. A melancholy mate or sullen steward might be seen apathetically pacing the deck, cursing the day which ever brought them to such an inhospitable country; the crew were all scattered over the face of the land seeking for nuggets, while the captain was wandering up and down Flinders-street—the Ratcliff Highway of Melbourne—entering public-houses, offering sailors £100 and upwards for the "run" home, and encountering in return, jibes and jeers, and flourishings of dirty bundles of one-pound notes within an inch of his nose. The temptation to desert was certainly very great. Most of these men, even if able seamen, had shipped at wages not exceeding £3. 10s. a month. Supposing the total voyage lasted ten months, that is, from Liverpool to Melbourne, from Melbourne to Calcutta, and from Calcutta home, they would not have more than £35 to receive; whereas, by deserting at Melbourne, they had the chance of making a golden fortune at the diggings, or even if that didn't answer, they could return in another ship, taking care that their own captain was out of the way, and earn three or four years' ordinary wages in as many months.

In those days, before the Hobson's Bay railway was constructed, the city of Melbourne was an awkward place to get at from the sea, as it was built up a narrow winding river, with a nine-foot sand-bar across its mouth. All cargo was brought to the town in lighters, while passengers and their luggage were, for the most part, conveyed in steamers, about as small and as dirty as our tug-boats. The captains of these steamers were very independent fellows, who stayed a very short time alongside any particular ship, in order that they might visit as many ships as possible during the day. When they came alongside, a tremendous scuffling and confusion ensued. Everybody tried to lower his baggage on to the steamer's paddle-box at once, and a good many packages were tumbled down anyhow, so that they split open and their contents were discharged into the water. I remember seeing boots and shoes, children's hats, hairbrushes, and all sorts of articles thus floating in the waters of the bay. The poor half-frantic owner had no means of recovering them, and they generally fell a prize to some piratical waterman, whose boat was lurking hard by. During one of these steamboat visits, one Spiller, a man who had been a London postman, quitted the *Ruth Hayward*. Mr. Spiller had a wife and seven children, the eldest of whom was a very nice-looking girl. But if on this occasion, our officers had watched the ex-postman's family closely, they would have seen that he had *eight* children, and that his eldest daughter was not

particularly pretty. A few hours later, when it was too late, the truth was discovered. Mr. Robb, our second mate, a sober, steady young Scotchman, had fallen in love during the passage with Miss Emma Spiller. He could not bear to part with her, and he longed to try his luck at the diggings. So he shaved off his whiskers, disguised himself in Emma's bonnet, shawl, and petticoats, and got clear away. I met him a year or two afterwards working as a tent-maker. He then told me that he bitterly repented having deserted from the *Ruth Hayward*, and that it was the worst day's work he had ever done. Every sailor was not so lucky as to have a sweetheart to dress him up in feminine attire, and as we had sentries posted at the gangway, it was not easy to escape.

Some of our men, however, had made up their minds to get away, and as they could not manage it by fraud, they resolved to do it openly. Just as one of these steamers was sheering off from the vessel, twelve of our crew sprang from the bulwarks on to the paddle-box, and ran below, hiding themselves, by the ready connivance of the enginemen, in the stokehole. Mr. Weekes the chief mate, and Chips the carpenter, leapt on board after them, and insisted that the steamboat captain should stop his craft, and deliver up the fugitives. He poured forth a torrent of bad language in reply, flatly refusing to do anything of the kind, while a gang of blackguards got round our officers, put their fists in their faces, and threatened that if they did not keep quiet they would fling them overboard. It was a most exciting scene, but Captain Staunton could do nothing to help our two faithful emissaries, who were thus fighting his battle against a host of enemies, because the steamer was by this time a cable's length from the ship. As the steamer sheered off we got a parting glimpse of Mr. Weekes and the carpenter. They were leaning resolutely against the boiler, and presenting their pistols in the faces of their antagonists.

"What will happen?" I heard Mr. Hennessy ask the captain.

"Unless they murder Weekes," answered Captain Staunton, calmly, "he'll get the best of them. He is one of the most determined men I ever knew. The steamboat captain knows well that the law is against him. He is bound, at the request of my officers, to hoist the signal for the Water Police from Williamstown, to come on board."

We watched the departing steamer with eager eyes, for we felt great fear that our two plucky fellows would be ill-used, if not murdered, when just as she entered the mouth of the Yarra Yarra, the villainous little steamer began blowing off steam, and a minute afterwards the police signal flew to the top of her grimy mast. Soon after, a long

black boat full of armed men, shot out from the Williamstown shore, and presently we had the satisfaction of seeing a dozen black dots dropped down the steamer's side into the boat. These were our runaway sailors, who were kept on shore in durance vile until the ship was ready to sail for Calcutta, were then brought on board in irons, and were not released till the ship was outside the Heads. Poor wretches! Although in what I have just written I seem to have taken the captain's part against the crew, I felt sorry for them. The temptation was tremendous, almost irresistible. I think shipowners acted at that time stingily and foolishly. They would have done better to authorize their captains to pay all men who stuck faithfully by the ship, double or triple wages for the run home. If they had done this there would not have been hundreds of ships lying for weeks and months in Hobson's Bay "eating their heads off," as the saying is; for few masters of vessels had such good luck as Captain Staunton, who recaptured all his runaways except the second mate.

I have often since thought that it would have been a good thing if all captains could have imitated one Petrie, who was not only the master, but the principal owner of the vessel which he sailed. On arriving in Port Phillip, and finding that everybody had gone mad on the subject of gold, he called all the hands aft, and addressed them thus:—

"If there's any one here who wants to go to the gold diggings, let him hold up his hand."

Every sailor on board elevated his hand at these words.

"Ho! ho!" said Captain Petrie, cheerfully, "you all want to go, do you?"

"Ay, sir."

"Then I'll tell you what we'll do. We'll lay the old barque up in the bay, put somebody aboard to take care of her, we'll go up to the diggings in a body, and we'll all share and share alike!"

The proposal was received with acclamations; three ringing cheers were given for Captain Petrie, and, what is best of all, the idea was practically carried out. The whole ship's company went to the diggings, worked amicably together for some months, and then brought their united spoils contentedly on board ship.

The cunning departure of Mr. Robb, a man who was expected by everybody to stick to the *Ruth Hayward* like a barnacle, and the open flight of twelve foremast hands, made Captain Staunton very anxious and suspicious. As soon as the sun went down, a watch was organized, composed of everybody who could be trusted. Nobody before the mast, I am sorry to say, was reckoned trustworthy in this respect, and the chief

mate and carpenter were ashore ; so the Vigilance Committee consisted of Captain Staunton, Mr. Salter the surgeon, Mr. Hennessy the third mate, three apprentice boys, the Deputy-Assistant Storekeeper-General, commonly called Steve Scudamore ; and last, but assuredly not least, Mr. John Prawle, formerly of Goree Piazzas, Liverpool, but lately Director of the Waterworks on board the A 1 British-built ship *Ruth Hayward.* When Mr. Hennessy gravely clapped a pistol in each of our youthful fists, I do believe we swelled to twice our actual size ; but our pride was somewhat abated by the thought that the honour and glory of carrying firearms loaded with ball in defence of Captain Staunton's vessel was shared by three 'prentice lads.

The captain was well aware that as soon as it grew dark there would be plenty of boats plying among the shipping in the bay, with the view of inveigling ashore their crews, who were only too willing to run away. Accordingly, we kept strict watch throughout the night, and as the sky was moonless and overcast, nothing could be seen at a very short distance from the ship. Our crew, with the exception of the twelve runaways, who were, by this time, cooling their unlucky heels in the lock-up in Williamstown, were supposed to be all fast asleep in their bunks in the forecastle, but in reality, no doubt most of them were full dressed, and had their kits made up in a bundle, in case any chance of bolting should present itself. Prawle proved himself a very valuable watchman ; for his great goggle eyes had the peculiarity, like those of a cat, of shining in the dark, and he could see things which nobody else could. During the darkest part of the night—namely, the hour before dawn, the watch on deck was in the hands of Mr. Hennessy, Prawle, and myself. Presently Mr. Hennessy made a signal for silence, and then whispered : "I hear muffled oars coming towards the ship ! " He pointed in the direction of the bows. We all crept softly thither, stooping beneath the bulwarks, so that the crew of the approaching boat might not discover that anybody on board was on the look-out. As we passed the forecastle we observed that there was a light burning there, which was extinguished as soon as our footsteps were heard. This showed that our sailors were awake, and that they were probably expecting some one coming from the shore to set them at liberty. It afterwards struck me that if they had chosen, they might easily have overpowered one man and two boys, but most likely they could not depend on one another. Besides, sailors are not such fools as people are apt to fancy. Running away from on board ship is a small offence, and punishable at the utmost by six weeks' imprisonment, supposing the deserters refuse to return to their work ; whereas using violence to an

officer engaged in the execution of his duty, is a serious matter, and only too frequently ends in murder.

To return to my narrative. Mr. Hennessy crept like a cat along the bowsprit, bidding us follow him. I was an expert climber, and went readily after him, but Prawle did not undertake the job very willingly. As he afterwards observed, "Though I may have the eyes of a cat, Stephen, I have the long and somewhat awkward legs of a human being unaccustomed to gymnastics; and then I had to consider how precious my life was to the skipper. I might have tumbled overboard, and he would have lost my invaluable services just when they were most wanted."

"It's so confoundedly dark," whispered Mr. Hennessy, presently, "that I can see nothing."

"I can," said Prawle. "I can see a six-oared boat, full of armed men, under the larboard chains."

As soon as these words were spoken, Mr. Hennessy bade us clamber back to the forecastle. Presently I heard a scratching sound, as if a lucifer match was being struck. A few moments afterwards, the brilliant flame of a blue light which Mr. Hennessy had stuck into a belaying-pin-hole, shot into the air, illuminating the sea for yards around, and rendering our would-be assailants clearly visible, as Prawle had correctly stated, under the larboard chains.

"Now then, my lads," sung out Mr. Hennessy to the boatmen below, "do you want a twenty-four pound shot dropped into your midships? Sheer off, or I'll sink you." As he spoke he exhibited a large round thing which he held in his hands.

The fellows in the boat muttered several curses expressive of disappointment, but one man in the stern sheets called out:

"This here vessel 's the *Pride of the Seas*, ain't she, from Hobart Town?"

"No," replied Mr. Hennessy; "the *Ruth Hayward* from Liverpool."

"Ah! then we've made a mistake, that's all. My eyesight's bad by night."

"Mine happens to be particularly good by night, gentlemen," cried Prawle, just showing his nose over the bulwarks. He spoke in such a comical voice, that even the disappointed jack-tar-hunters burst out laughing.

"Well I'm sorry you ain't the *Pride of the Seas*," rejoined the steersman of the boat in a persuasive voice; "if you were, I've got a quarter of fresh beef, a sack of potatoes, and a barrel of ale for you."

"It won't do, my lads," said Hennessy. "We don't take stores in at

dead of night. Sheer off, or down goes this twenty-four pounder among you."

"Give way, my lads," said the steersman, sullenly. When he had got to a safe distance, he roared out: "Confound you for a set of lime-juicing humbugs."

The colonial seamen term a long-voyage ship, which trades to Europe or America, a lime-juicer, because on board such vessels, that valuable commodity is served out by Act of Parliament to prevent scurvy.

When the sound of the oars of the piratical craft had died away in the distance, Mr. Hennessy with a dry laugh, struck a match, and exhibited his twenty-four pound cannon-ball.

It was only a "fender," one of those bags of canvas stuffed with oakum, which are used by ships in port and elsewhere to save their sides from being bruised. A quartern loaf, flung into the boat, would have done as much damage.

(*To be continued.*)

Velocipedes.

WHETHER velocipedes will ever become a necessity of our civilization—the "fast" adjunct to our "fast" age—it is impossible to say, though appearances would warrant such a prediction. There are enthusiasts who see in a bicycle the solution of some gnarled social problem, and believe that a tricycle will obviate some festering evil of our era, though at present the popular toy of the hour only flatters our pride by giving power over space; and there are those who sneer at the new-fangled contrivances, and point out that similar machines have been used before, and found wofully wanting. They predict ruptures, sprains, dislocation, and death as the penalty of using these mechanical contrivances. They point out that they are excessively laborious to work, that there are a thousand abstract arguments why they cannot succeed; and whilst they are proving the case velocipedes are to be found in our streets, and our gymnasiums are thronged by anxious learners and expectant possessors of the new iron horse and carriage combined.

If the velocipedes of to-day were of the same construction as those which belonged to the past, no reasonable individual could deny that their use involved danger and fatigue without any compensation whatever, for those who tried them found that, though they succeeded in a certain sense, yet the result was so meagre as to furnish a familiar exemplification of "the work not being worth the candle." The principle was present in the old hobby-horse, but the power was misapplied, and hence the failure and abandonment of the idea of making the velocipede popular. The shaking, squeaking three or four wheel spasmodic machines were discarded and placed in the same category as flying machines and perpetual motion.

Until the past few months it was always understood that velocipedes were invented about the year 1819, but recently one daring writer has asserted that the idea was coeval with the invention of the crank, which, after all, gives no higher antiquity, for, strange to say, the simplest of all inventions for turning a vertical into a rotary motion is not so old as the century. The Parisians, who have the honour of recuscitating and making velocipedes fashionable, and yet popular, claim the honour also of its invention. They point to the *Journal de Paris* of July 27, 1779, which describes a vehicle invented by the celebrated aëronaut M. Blanchard, in connection with M. Masurier. As far as can be judged from the description, this machine was a combination of the hobby-horse and trolly : one man was seated in front, and acted as driver or guide, whilst another supplied the motive power by pressing his feet alternately on the ground. This individual must have had a hard time of it, for it was found exhausting work to move the old velocipedes by the same means, though the weight could not have been more than a third of M. Blanchard's machine and driver. It is thought (for there is little known positively on the subject) that the manual power was aided by some mechanical contrivances, of which springs formed a part. This invention was exhibited both at Paris and Versailles, but it does not appear to have met with either royal or popular favour.

A generation later the *célérifère* made its appearance in the gardens of the Luxembourg; but, from the caricatures, it was evidently but a clumsy variation of the old hobby-horse, with its low wheels and rupture-producing movements. We, who are familiar with the controlling power and automatic movements of the modern bicycle, can hardly realize the formidable difficulties of this unmanageable and barbarous contrivance. It was propelled by the action of the feet on the ground; there were no means of guiding, controlling, or directing its movements; whilst an unfortunate slip or false movement resulted in painful sprains.

A dozen years afterwards, and we enter into the regular historic period of velocipedes, and find them in use in England. At first they consisted simply of two wheels, very similar to the present bicycles in appearance, but were propelled by the action of the feet on the ground. The following is a sketch of one of these hobby-horse contrivances, sketched more than thirty years ago. One somewhat similar in construction was used for many years by one of the Northamptonshire peasants, but the wheels were of less diameter. A drawing of an American one of the same period shows that the general principle was the same throughout, though varied in form and construction.

The next machines that came on the scene are hardly yet displaced by the Parisian and American improvements. We have seen them in

use in a fashionable town within the year. They were three and four wheeled vehicles, moved by a series of treadles and levers, acting on cranks. They never were, or could be, popular; for a man could walk a dozen miles with twice the ease he could propel himself along in the old-fashioned velocipede.

The modern bicycle or horse-carriage is a very different contrivance. By exercise of the same exertion as he would use in walking a dozen miles he can travel thirty at least on an average road. This is denied by some sceptical theorists, but there is no valid reason to doubt the fact. Every step of the treadle, instead of carrying the body forward thirty inches, carries the vehicle forward three yards, and we are not surprised to learn that twelve miles an hour is a common speed for an expert, or that a mile has been "done" in a race in less than four minutes.

The rage for velocipedes has been so great and so universal in Paris that nobles and commoners have vied with each other in the complete-

ness and elegance of their equipments. Periodic races take place, and many of the riders display the utmost dexterity on their fragile and dangerous-looking vehicles. Government officials and mechanics use them in going to and from their employment, and even the Prince Imperial has been furnished with an elegant velocipede of rosewood and aluminium bronze. The prices of the Paris vehicles range from fifty francs for one suited for a boy, to two hundred francs and upwards, according to the style and finish.

The idea of annihilating space seems to have tickled the American fancy quite as much as the French. Their riding-schools are nightly thronged by hundreds who wish to acquire this new method of locomotion. We even learn that one of the Fifth Avenue art-galleries in New York has been converted into a velocipede riding-school. Not only is there a great want of accommodation to practise, but the manufacturers cannot produce velocipedes fast enough to supply the demand. The French pattern has been considerably modified by the Americans, but the singularly high price for so simple-looking a piece of workmanship has been maintained. The price of a plain substantial machine is $100, and those which are sumptuously fitted with ivory handles and silver plating have fetched $200. This high price is attributed to the number of skilled artisans employed in their construction, and to the fact that nothing but the very best of material can be used. Every piece must be made by hand, of wrought iron, steel, or brass. It is as well to state that cast iron has been used and discarded as dangerous to the rider and pecuniarily fatal to the manufacturer. The patterns of the velocipedes most in vogue are the Wood, Pickering, and Hanlon machines, all varying in some small detail from the French pattern. Of these it is estimated that 5,000 will be in use in the course of the summer in New York and its vicinity alone. The demand is so great that some of the leading carriage-builders have devoted a large portion of their establishments to this branch of business. They, however, pay a royalty to Mr. Calvin Witey, who, seeing that velocipedes were likely to prove a "big thing," secured the patent in the United States for bicycles, to the disgust of the other manufacturers.

In Great Britain the movement has brought out the old four-wheeled velocipede, which is so little under control that a poor woman lost her life through one in Glasgow this year. We have before us, however, the designs for at least five-and-twenty varieties of bicycles and tricycles, the result of British ingenuity. Some of these are the perfection of absurdity, and those which are immediately and essentially practical are advertised at prices which seem preposterous considering the simplicity

of their construction. The lowest sum that we have heard asked for a bicycle is £8, and at first sight it seems that half that sum would be ample, as the wheels alone can be purchased retail at 30s. the pair. But skilled workmen are scarce, and the various manufactories engaged in making the new wheel-horse are so busy that until the demand slackens no material reduction in price may be looked for. Mr. Lisle, of Wolverhampton, has, however, advertised a variety of bicycles and tricycles at a price so moderate that they deserve the attention of every intending purchaser. The patterns are the very best and most approved construction. He has the French, American, and German patterns of bicycles, and his tricycles, especially those adapted for ladies, are models of beauty and strength. We intend in a future paper to give engravings of bicycles and tricycles together with the most explicit directions as to making and using velocipedes, so that young gentlemen can have them made of a size to fit their height and other peculiarities. We may add that about twenty hours' practice is all that is necessary to give facility and adroitness in balancing and managing a bicycle.

DANDY AN AUTHOR.

The True and Wonderful History of the Dog Dandy

BY HIS OWN MASTER.

PREFACE.

THIS is the veracious history of a veritable Dog. Each Canto describes a distinct epoch of his existence, and every incident is based upon some fact of his canine experience.

The history of his wife "Flora" is also embodied. They were SPANIEL SETTERS of thoroughbred parents; and their joint adventures have been thus appropriately celebrated in purest DOG-REL, by special desire, to accompany a genuine portrait of "Dandy," which was painted by a talented lady artist and admirer of no small skill for a recent Fine Art Exhibition at Bombay.

Dandy's military career, like that of other distinguished heroes, such as Wellington and Napoleon, was so closely interwoven with the history of his country, that a few brief introductory memoranda may be necessary for the better understanding of the first Canto, relating to his "Campaign in Oude."

This occurred in 1857-58, when the Indian Mutiny and its attendant struggles found full occupation for the small handful of British troops available for its suppression. The story opens at that most critical period when the two great capitals of Delhi and Lucknow were in possession of formidable hosts of mutineers and insurgents; when Generals Neil and Havelock were struggling against the ferocious Nana near Cawnpore; and making heroic efforts to reach the Lucknow Residency, where the brave Henry Lawrence still protected hundreds of Englishwomen and children against a countless multitude of armed besiegers, with the

aid of a weak and half-starved garrison of his countrymen; while his brother officer of the Bengal Artillery, Archdale Wilson, held in check several thousands of disciplined sepoys who had concentrated within the walls of Delhi, to stake their lives upon one great struggle for the Empire of India.

Such was the momentous crisis of affairs, when "Dandy" took the field, and, perhaps, turned the scales in favour of the English. His subsequent adventures scarcely need explanation.

They have been repeatedly read aloud to delighted audiences of young and old; and, having been ably illustrated by one of our most celebrated artists, are now committed to print with a view to a wider circulation.

V. E.

CANTO THE FIRST.

HIS CAMPAIGN IN OUDE.

I.

"Dandy," whose portrait here you see,
Was born of purest pedigree
While travelling to Bengal by sea.

II.

"Flora," his sister, friend, and wife,
Sprang simultaneously to life,
Nor once exchanged they words of strife.

III.

No sooner in Calcutta landed,
Than off to Oude they were commanded,
Where foes were mutinously banded.

IV.

Tho' early thus to war inured,
To crime they never were allured,
Nor were their canine lives insured.

V.

Ah! 'twas a fray that tried the mettle
Of dogs and men!—more hard to settle
Than contest betwixt Pot and Kettle.

VI.

'Gainst fearful odds, 'neath scorching sun,
Brave Neil and Havelock fought and won,
And yet their task seem'd scarce begun ;

VII.

For, still hemm'd round by traitor host,
Lawrence stood firm at peril's post ;
Of Indian heroes honour'd most !

VIII.

And still, on Delhi's parching plain,
Wilson's stanch warriors strove in vain
Yon rebel citadel to gain.

IX.

But lo ! with Persian laurels crown'd
Outram obeys the trumpet's sound ;
" Aye, ready," where most blows abound.

X.

Havelock—Neil—Outram—blest alliance
Wherewith to bid the foe defiance,
Nerving all hearts with fresh reliance.

XI.

E'en Dandy wagg'd his puppy tail,
Eager the rebels to assail,
While Flora howl'd a warlike wail.

XII.

Onward ! resistless as a wave
Our soldiers swept, resolved to save
Their comrades from a cruel grave.

XIII.

Backward ! from Cawnpore to Lucknow
The foe were driven—to them, I trow
Foretaste of final overthrow.

XIV.

The city reach'd, warm wax'd the fight
From street to street, till—welcome sight !
The baffled traitors took to flight.

XV.

Dandy and Flora in the rear,
With loud "bow-wows" contrived to clear
Their way through foemen venturing near.

XVI.

The gate was near'd! Soon hand grasp'd hand
Of each devoted soldier band;
Some strong men wept,—for once unmann'd.

XVII.

Still hamper'd with some scores of sick,
Wounded, and women scatter'd thick,
'Twas plain that there the force must stick,

XVIII.

Till reinforcements should arrive;
And Dandy meanwhile must contrive
To keep himself and spouse alive;

XIX.

Two months in garrison coop'd up,
With empty dish and cheerless cup,
They seldom found whereon to sup;

XX.

And famish'd soldiers oft would flurry
Their minds, by hinting how much worry
'Twould save—to cook of them a curry!

XXI.

But, tho' reduced to skin and bone,
They still maintain'd their valiant tone,
Nor ever join'd in croaker's groan.

XXII.

In very nick of time, at last
Clyde came to terminate their fast,
And o'er their gloom a light to cast!

XXIII.

Thus was Lucknow twice sought and saved;
Thus Dandy and his wife both braved
The fight!—and gallantly behaved!

XXIV.

Not e'en the generals, who led all,
Better deserved the Lucknow medal
Than these brave doggies :—now I've said all—

XXV.

That's known for certain on the matter,
Till great guns came Lucknow to batter;
By which time Dandy had got fatter.

XXVI.

In fact, had grown to dog's estate,
With Flora for his fitting mate :—
His next adventures I'll relate.

(*To be continued.*)

KEY TO PUZZLES ON PAGES 254—256.

1. Cryptograph.

O, Caledonia! stern and wild,
Meet nurse for a poetic child!
Land of brown heath and shaggy wood,
Land of the mountain and the flood,
Land of my sires! what mortal hand
Can e'er untie the filial band
That knits me to thy rugged strand!

2. Demonstration.
3. Transportation.
4. Vespasian.
5. Kaleidoscope.
6. Velocipede.
7. Temperaments.
8. Phospherescence.
9. Stammering.
10. Contamination.
11. Hotspur.
12. Tame, Aian, Mayo, Enos.
13. Dart, Aboh, Rota, Than.
14. Agde, Goes, Debt, Este.
15. Jane, Aroo, Noto, Eooa.
16. The Brook, Tennyson.

17. Cryptograph.

Man in society is like a flower
Blown in its native bed: 'tis there alone
His faculties, expanded in full bloom,
Shine out; there only reach their proper use.—
Cowper's Task.

18. Sir Ralph Abercrombie.
19. Blue Gown, The Derby.
20. Kingfisher.
21. The Talisman, Walter Scott.
22. Plymouth.
23. Napier, Nelson.
24. Thomson—*Hymn on the Seasons.*
25. Lord Byron—*A Midsummer Night's Storm on the Lake of Geneva.*
26. Pollock—*The Destruction of the World and Creation of a New One.*
27. Pringle—*The Scottish Exile's Farewell.*
28. Song, Oval, Nape, Glew.
29. Clot, Lava, Oval, Talc.
30. Adit, Dace, Icon, Tend.
31. Tame, Opal, Mars, Else.
32. Rienzi, Lytton.
33. William Pitt, N. Bonaparte, Demosthenes.
34. Paris, Pekin.
35. Nelson, French.
36. Unimaginatively.
37. Ecclesiastical.
38. Parallelopiped.
39. Eleemosynary.
40. Unconstitutional.
41. Supererogation
42. Obstruction.
43. Inheritance.
44. Suppositional.
45. Sweetheart.
46. Recapacitate.

Far Away in the Frozen Seas;

OR,

A STORY OF A WHALING EXPEDITION.

CHAPTER V.

WINTER QUARTERS.

A FEW days after sailing from Cape Riley, our travellers came to a bay, where, to their great surprise, they found a settlement of Esquimaux. They had thought so remote a spot would be quite uninhabited, and, on discovering their mistake, determined not to pass without paying the good people a visit; so Captain Becker went on shore, with Robert and Hans Christian and some of the sailors. Hans at once began his old work of making inquiry among his countrymen about Captain Griffin. But they could give him no information whatever, though quite frank and communicative on every subject. They said they were wandering hunters and fishermen with their families, just staying for a season in that place, and intending to journey further south when the severe winter set in. Captain Becker distributed a few presents among them, and was about to go back to the ship, when Hans stopped him and said, "Sir, in all likelihood this will be our last opportunity for buying dogs and sledges, and I would advise you not to let it slip."

"Dogs and sledges?" replied the Captain; "what should we do with them?"

"Indeed, sir, I don't see what we should do without them, if we are to stay here all the winter. They are perfectly indispensable for hunting any distance."

"That's true," said the Captain, thoughtfully; "I had forgotten that. Besides, the animals will be serviceable in other ways, for I don't fancy any of us will want to lie idle all the winter, and do nothing. But how can we keep the beasts? we have no food for them."

"Oh, you leave that to me, sir," said Hans; "they won't want for food so long as I have powder and shot. There are plenty of wild animals about, and if you only stay one day here, I'll lay in enough provender to last them a good long time. Esquimaux dogs are not dainty; they eat everything, from bears and seals down to fish-heads and any sort of offal. Salt meat is about the only stuff they don't fancy."

"But will your people sell us dogs and sledges?" asked the Captain.

"I'll see about it," said Hans. "They have plenty, at any rate, and could quite well let us have forty or fifty dogs."

Without delay Hans sought out the leader of the company, and soon concluded a bargain with him for a certain number of sledges, and fifty of the best dogs in the pack. They were brought carefully on board, and a special division of the ship was assigned to them. Then Hans slung his gun over his shoulder, and announced his intention of going to seek food for them. Robert wanted to go too, and the Doctor also volunteered his services; so all three started off in a boat for a little bay not far distant, where Hans had been told by his countrymen that the narwal, or rhinoceros, might often be seen.

The Esquimaux had not deceived them; for, when they got to the bay about half an hour afterwards, sure enough there they saw five or six at least of those sea-monsters sporting themselves in it. They rowed up quite close to them, but the narwals did not betray the slightest alarm. They rolled themselves over in the water, and pursued each other round the bay, lashing the waves to foam with their tails, and then lay awhile almost perfectly motionless, without noticing the little boat at all. Hans made the rowers stop, and lifted his gun and fired. Nearly at the same instant one of the narwals reared up out of the water, but fell again immediately; and after a few convulsive struggles, the huge unwieldy monster rolled over on his back.

"There's one dead, at any rate," said Hans, very contentedly, as he reloaded his pistol: "my ball went right through the eye into his brain. Now, Mr. Robert, you try your luck; but mind and only aim at the head. If you don't crack the brute's skull, he won't feel your ball any more than he would a pea."

Both Robert and the Doctor were trembling with excitement, and they were so eager to fire, that all their fear was lest the narwals should

get alarmed and dive below, and so deprive them of the chance. However, there was not the least appearance of this; they swam slowly round their dead companion as though nothing had happened.

"Now's your time, sir," said Hans, as one of the animals raised his head out of the water, right in front of them. "Both fire at once!"

He had hardly got the words out of his mouth, when crack went the guns; and the convulsive throes of the narwal, with the frothing and foaming of the sea, showed plainly that the shots had taken effect. But the rhinoceros was only wounded, not dead, and, plunging his head beneath the waves, vanished from sight.

"Keep still!" said Hans, "he will soon come to the surface again to get air."

And scarcely a minute had elapsed before the water heaved violently, and the leviathan form of the monster rose out of it like some towering rock. Almost at the same instant Hans fired, and said, with a satisfied smile, "Now he has his share—my ball finished him."

So it proved; for, after rolling over once or twice, the huge animal lay motionless on his back like the other.

"I think we have enough now," continued Hans. "Those two narwals will weigh together about twelve hundred pounds, and that will be sufficient to last the dogs several weeks. We must put a rope round them and tow them to the ship, and then cut them up."

This was rather a laborious business. However, a well-manned boat had been sent out to meet them, and, with the help of the strong sailors, they managed to get alongside the *Hope* before nightfall. The narwals were cut up and stowed away in empty casks. There was no fear of the dogs wanting food for a while at least; so, after a friendly leave-taking of the honest, kindly Esquimaux, the ship steered away further to the north with the first favourable wind. The voyage became now more difficult and dangerous every day, as the winter visibly approached. The masses of ice began to increase, announcing the prospect that they would soon be shut up in whole fields of it. Sometimes, as it was, they got blocked in among the packs, and only managed to get out again by using saws and ice-chisels. Early in September they were obliged to give up all hope of proceeding further, as nothing lay before them, as far as the eye could reach, but one broad sheet of ice. After a short consultation, it was unanimously decided to seek some sheltered cove, where the vessel might lie at anchor, and they might settle themselves for the winter.

No sooner said than done, for they turned away a little to the south, and by the next day had discovered a place which seemed suitable in

every respect. It was a tolerably large bay, with a fine open expanse of water, which made a most agreeable contrast to the ice all around. The secret of the clear, open water, was a rushing stream that flowed into it from the land over a rocky bed, with the violence of a mountain brook gushing out of some fiord. The banks of this stream were most refreshing to the eye, for they were covered with grass and various species of plants. Not far from the south-west corner of the bay, the broad icy flood lay bound with the little rivulets from the stream, and gave promise that summer would speedily loosen their chains and free them from captivity. Better still, the bay was sheltered from the floes, or drifting masses of ice by high headlands which surrounded it towards the sea, and enclosed an anchorage of many feet deep, and it was quite open to the noonday sun. No better spot could be found for winter quarters.

This being the universal opinion, Captain Becker had the ship brought into the bay at once. Besides the excellent anchorage, they discovered that there were several small islands right in front, which completely protected them from the ice outside. So there lay the *Hope* safe in port, shut in for the winter; for all on board knew that they had no chance of getting out again, at least before the early spring.

The safety of the ship was now fully secured, but much still remained to be done to shield the crew from the fearful cold for which one must always be prepared in winter in those northern latitudes. Captain Becker lost no time in getting ready to meet it. His first work was to have the whole of the cargo taken out and deposited in a storehouse which he had erected for the purpose in a suitable place on shore. All the crew lent a helping hand at this, and for several days running the boats went back and forward incessantly, till at length the hold was quite cleared.

The next thing to be done was to convert the ship into as comfortable a habitation as possible; and in trying to effect this, Captain Becker made use of the experience he had acquired among the Esquimaux, the aborigines of the country. He had come to the conclusion, from close observation, that the peculiar arrangement of their huts inside and their peculiar mode of living was, apart from their habitual filthiness, the best and safest for those icy regions. He therefore determined to follow the Esquimaux fashion, and make the interior of the *Hope* as much like an Esquimaux hut as he could. For this purpose, the sledges were brought into requisition, for collecting great quantities of moss and turf with which to make an intrenchment, behind which they might bid defiance to the cold.

Below the deck a space was enclosed of eighteen feet square, and the

walls of this, from top to bottom, were covered with a layer of moss and turf. The floor was carefully plastered over, and a two-inch-thick matting of Manilla hemp laid down, and on the top of that, again, strong sailcloth. The entrance was in the hold, through a low tunnel filled with moss, and as many doors and hangings to prevent the keen winds from finding their way in, as could possibly be made in it.

The gathering of so much moss was no easy task, for all that grew near the shore was a tangled mass of bindweed and grass; and it was already completely frozen; so they were obliged to go further inland in quest of it, to sunny rocky slopes, and loosen it from the stones with crowbars, and carry it down to the boats on their shoulders. But in spite of the difficulty the work was happily accomplished; for every man did his share, and Robert and the officers set a good example of activity, instead of contenting themselves with being mere idle on-lookers.

But it was indeed high time that all these necessary and important preparations were finished, for winter was close at hand. There was every sign of its speedy approach; the birds, which had flocked about the ship when she first arrived, all at once took their departure south. Two days later a severe frost set in, and, though it was only yet the middle of September, the water was frozen so hard and thick in one single night, that in the morning they could walk all round the ship, and drive in sledges to the shore.

"We're in for it now!" said Captain Becker. "Here we are, locked up in the ice, and here we must lie for many a dark weary month."

The winter dwelling was quite ready, but arrangements had still to be made for stationing stores of provisions, as far as practicable, all along the Greenland Coast. Captain Becker never forgot that the one purpose of his voyage to the Polar Sea was to find his friend Captain Griffin. It was impossible for the present to prosecute his search any further by water, but the land was still open; and it was principally for this end that he had bought the dogs and sledges. Nothing more was necessary now but the goodwill and perseverance of the crew, and fortunately this was not lacking. All the men were strong and healthy, and ready for work; firmly resolved at any cost to gain their noble generous object.

"Somewhere on the Greenland coast," said the Captain, after mutual deliberations on this important subject, "somewhere here our friend Griffin must have found shelter, if he and his men are still living, as I confidently believe through God's mercy they are. Further south, his place of refuge cannot be; consequently it must be further north.

What I therefore propose is, to push our way as far north as possible ; and for this purpose we must plant stations well stocked with provisions all along the road.

"We can make these stations our centres of operation, and explore the country far and wide, without always being obliged to return to the ship. In this way we shall be able to get sixty or seventy, or even eighty miles further north ; and things must go badly indeed, if, within those limits, we fail to discover our friend. He can scarcely have gone beyond them, and this confirms my expectation of finding him, if we can manage to carry out my plan."

The Captain's views met with general approval, and it was determined to begin arranging the stations at once. It was, indeed, a business that did not admit of much delay, for the days became shorter and shorter, and a steady increase of the cold might be looked for with certainty. It was intense enough now to make a broad belt of ice all round the coast. This would be a capital road for sledging, for it was as smooth as glass, and the only danger that threatened it, was giving way through storms or sudden high tides caused by the mighty icebergs out in the offing. But such an occurrence could not happen so quickly that they would not have time to escape. All that was necessary was to hasten on to the nearest part of the coast, where they would be in perfect safety.

Every one set to work now to pack the sledges with the stores for the different stations. The sledges were found to answer the purpose admirably. They were made of tough wood, and the shafts were mounted with steel. This was all the metal about them, the object being to make them as light as possible. The different parts were fastened together by thongs of seal-skin, which yielded to any unevenness in the road, or sudden jolt, without giving way in the least. They were both light and durable, and might confidently be expected to work well.

The loading of each sledge, besides the provisions for the party, consisted almost entirely of pemmican, that is, dried and powdered meat. Part of this was in a tin cylinder, with sharp pointed ends, to ward off any possible attacks on it by polar bears, and the rest in wooden chests and barrels, bound with strong iron hoops.

The equipment of the men was a coat of buffalo-skin, a bear-skin sack to creep into at night when they were obliged to camp under the open sky, several water-proof wrappers to protect them from the snow, and a canvas tent. Provided with these comforts it might reasonably be hoped they would not suffer greatly from the cold, even if it became very severe.

The question now was—who should accompany the expedition?

Robert had, from the beginning, declared that on no conditions would he be left behind; and that Hans should go too was a matter of course, for no one else knew so well how to manage the dogs. A sufficient number of sailors were selected to join them, and by the 20th of September all was ready. At half-past one the expedition started, amidst the hurrahs of those who remained on board the ship. Hans led the way, with six dogs harnessed to his sledge. Five others followed, driven by sailors with the same number of dogs to each, and Robert brought up the rear, and kept all the others in sight. The light vehicles flew almost noiselessly over the smooth, polished ice, while the dogs barked their loudest, as if it were a real pleasure to breathe the wintry air once more after their long, weary rest.

(*To be continued.*)

On the Solution of Cryptographs.

MANY of the readers of the *Young Gentleman's Magazine* are doubtless debarred from gaining prizes for the solution of puzzles by their inability to decipher the cryptographs. The long array of unpronounceable syllables at first sight seems insurmountably difficult, but if set about in the right way the difficulties will soon vanish, and the hard-looking syllables will resolve themselves into the common and familiar words of every-day life.

But how thus to set about it, is the difficulty which many stick at. A few hints on the subject may, therefore, be acceptable.

First, then, what is a cryptograph? The word is derived from two Greek words, κρυπτος and γραφω, meaning, in plain English, hidden writing. From the earliest times ciphers of some sort or other have been used when the communication required secrecy, the parties having agreed beforehand upon the cipher to be used. Sometimes pictures of animals, birds, insects, or some other common object, have been used to represent certain letters or words, as in the Egyptian hieroglyphics.

Sometimes the words have been spelt backwards, or anagrams made of them; but the commonest kind, and the one we purpose here to explain, is that in which a letter or figure is put in place of each letter in the alphabet. There are many methods of deciphering such cryptographs without the aid of a key; the simplest and best way is as follows:—

First, write out the alphabet on a sheet of paper, taking care to get it all in one line, to avoid confusion. Some letters can at once be discovered; for example, if there is a letter standing alone in small characters it must be "a," and if in large, "I:" and if there is a letter standing at the end of a word with an apostrophe before it, it must be "s." If there are any such letters, put the cryptograph cipher under

the letter in your alphabet it represents. Next see which letter occurs oftenest; this is almost sure to be "e."

Having guessed these few letters, find a word in which one or more of them occurs, then putting in place of the cipher the alphabet letter it represents and a blank for those which you do not know, think of a word which has these letters in the same position, and repeat the same process till you know the letter which each cipher represents. This done, the whole cryptograph will be easily deciphered. In order that this method of solving cryptographs may the more readily be understood, we will illustrate it by the first cryptograph in the March number of the *Young Gentleman's Magazine*, which stands as follows:—

Cryptograph.

Ipy yaxe bqvq lys pmzdxjqo ijbxop,
Jaymnp lys fyzwjojafj bah pjbxop,
Bah xjrqmsj ipja prq iysv rq hyaj,
Oy sjbh prq dyyv
De fprzaje ayyv
Ys qosyxx bo qjooran yl opj qma;
Ipy oyrxq bq jkjse zba qpymxh oyrx,
Lys lbrs sjibsh jsjfo bah lsjj:
Oprq rq opj zba—
Obj djqo yl zja
Oprq rq opj zba ij zjba oy dj.

Now, then, how shall we set about finding it out? First let us write out the alphabet in one straight line—

a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z.
b, d, f, h, j, l, n, p, r, v, x, z, a, y, w, s, q, o, m, i, e.

Let us, then, look and see which letter is most often used, especially at the end of a word. Here it is certainly "j;" let us, then, put j under the e in our alphabet. Now the question at once suggests itself to us, what word of three letters ending with e is expressed by the cipher letters o, p, j, so often occurring in the cryptograph. The only word that answers to this is "the;" therefore, let us put o under t, and p under h. Now let us look for a word which contains these three letters. On looking, we find two words, ijbxop and pjbxop. Putting the letters we know in the place of the cipher, and blanks in the place of those we do not know, we have for the first word - e - - th, and for the second word he - - th. We at once think of "health" and "wealth" so often made to rhyme in poetry. We now put i under w, j under e, b under a,

x under l, o under t, and p under h. Now what is this little word oy? We know that o stands for t, and the only word of two letters beginning with t is "to;" therefore we will put y under o. Then by a similar method we find out that "yaxe" stands for only; and then, as we know that "a" stands for "n," we find that "ayyv" stands for nook, the only other word beginning with noo being noon, which it cannot be, as in that case the last letter would be the same as the first: then, proceeding in the same way, we find out word after word till we know what each letter stands for, and have a perfect key like the above. Then, beginning at the first word, we go straight through and spell out word by word the following lines:—

"Who only asks for humblest wealth,
Enough for competence and health,
And leisure when his work is done,
To read his book
By chimney nook,
Or stroll at setting of the sun;
Who toils as every man should toil,
For fair reward erect and free:
This is the man—
The best of men—
This is the man we mean to be."

In this way most of the cryptographs in this magazine will be readily deciphered. In some, figures are used—as in the second one of the March number—which, at first sight, look very puzzling; there is no real difference, however, in their construction; they are just as easy to decipher as the other kind.

There are many other varieties of cryptographs, but which we have no space here to dilate upon, and as they seldom or never appear in puzzle pages, the account of their peculiarities and means of solving them would only prove tedious and wearisome to the reader.

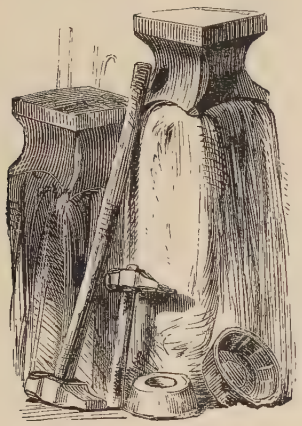
Trades connected with Science and Art.

By THOMAS ARCHER.

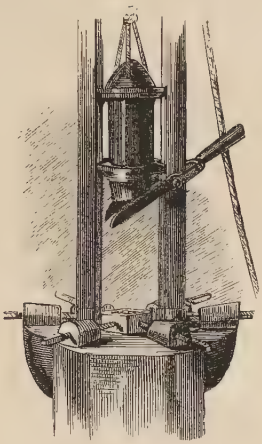
GOLDSMITHS' AND JEWELLERS' WORK.

THE art of the goldsmith is so closely associated with that of the engraver on metals that we shall have to consider only the operations belonging to the actual fashioning of articles of gold and silver, and say very little about some of the methods employed to ornament them.

Gold, which is the most valuable metal used for coinage as well as for ornaments, is found only in comparatively small quantities in any part of Europe. In Spain there is a trace of it among the sands of the Tagus, and even in France, Piedmont, and Tuscany it has been discovered, as well as in Ireland and at Salzburg, where it has been obtained to a larger extent. The largest quantity of European gold has been met with in Hungary and Transylvania, where mines have been worked and the yield has been as much as from one to two thousand pounds weight in the course of a year. It was from Asia that the larger part of the gold was brought until the discovery of the deposits in Brazil, Peru, Ecuador, New Granada, Mexico, North Carolina, and more recently in California, which, with Siberia and Brazil, yields the largest quantity. Recently, however, a considerable proportion of the gold imported into this country has come from Australia, where large gold-fields have been discovered. During the last few years the value of the gold received here has amounted to about £15,000,000 annually, besides a considerable quantity brought by private persons, and not passed through the Custom-houses. The peculiarities of gold are, first, that it is the only yellow metal (for brass is not a single metal, but an alloy); secondly, its great weight; it is



ANVIL, DIES, SLEDGE-HAMMER.



THE DROP DOWN.

HAMMERING.

THE DRAWING BENCH.

the heaviest substance known, except platinum; and thirdly, its remarkable malleability. It is this property which enables it to be beaten into the thin film known as gold leaf, which has been made of no greater thickness than the three hundred thousandth part of an inch. Gold leaf is made by first casting the pure metal in bars; these are rolled into thin ribbons, and then again cut into pieces an inch square. A hundred and fifty pieces are made into a pile with pieces of thin vellum interposed between; the whole is then beaten with a convex-faced hammer, fifteen pounds in weight, until the plates of gold are sufficiently extended; they are then divided into four pieces, and placed between layers of membrane obtained from the entrails of the ox, are beaten again with a ten-pound hammer, and when sufficiently enlarged are once more divided into four, and beaten for the third time. The leaves are now so fine that one hundred square feet weigh about an ounce troy, the average thickness being the two hundred and eighty thousandth part of an inch. This is by no means the greatest degree of divisibility which gold will sustain, for the gold which is placed upon silver to be drawn out into the silver gilt wire, so much used in gold lace and embroidery, is not more than a twelfth of the thickness of gold leaf, and a minute quantity of gold in solution is used for giving that peculiar glare to the cheap earthenware known as "lustre ware."

It is too valuable a metal, however, for forming articles of great size or weight, and thus we find the greater quantity of costly plate is either silver or silver gilt, and ordinary articles of jewelry are also frequently covered with a thin coating of gold by means of placing them in a solution of gold which is deposited on them by electricity,—a process which is known as electro-gilding. Gold and silver plating, however, is also effected by mechanical means, for by pressure between steel rollers a thin layer of gold or silver may be made to adhere to a thicker plate of an inferior metal; but gold plate, properly so called, is of the true metal alone, with only different degrees of alloy,—that is to say, with greater or less quantities of inferior metal added to it; a small quantity being necessary to increase its hardness and durability, and a larger quantity of course diminishing its value.

Gold by itself is so soft a metal that it will too quickly wear out when it is used alone either for coins or for articles of ornament, such as are commonly called jewelry, and a proportion of copper and of silver is added to it in order to render it durable. In our coinage there are two parts of alloy to twenty-two parts of pure gold; this is called standard gold, and its price is fixed by Government at £3. 17s. 10½d. per ounce. Pure gold, therefore, is represented by the

figure 24, and is called "*carat*" gold; the word "*carat*" is taken from the old *Karatium*, which was the twenty-fourth part of the *marc*, or half-pound. It seems, however, that the *carat* was of different values in various countries, and came simply to mean the small weight used for gold and jewels. It now represents no particular weight, but only a proportion, so that pure gold is called 24 carat; 23 parts gold, and 1 part alloy, is called 23 carat; 22 part gold and 2 parts alloy, is called 22 carat; and so on. Gold of 18 carats—that is to say, 18 parts of gold and 6 parts alloy—is generally used by the jeweller; and, at one time, no lower quality was permitted to be stamped as gold after being assayed or tested. The laws for assaying all articles made of gold and silver by the Goldsmiths' Company were framed in the reign of Richard II., in consequence of a petition from the London goldsmiths, complaining of dishonest tradesmen who "made false work of gold and silver, as bracelets, lockets, rings, and other jewels, in which they set glass of divers colours, counterfeiting right stones, and put more alloy in the silver than they ought, which they sold to such as had no skill in such things." It may be supposed that no customer would find it easy to tell 12 from 16 carat gold, or even 12 from 18; and so a charter was given to the London goldsmiths, who then carried on their business only in Cheapside, and all articles of gold and silver were taken to them to be assayed. The law still remains that the assay shall take place, but there are offices for this purpose in other places beside London; and the London goldsmiths do not all live in Cheapside, so that the gold and silver is stamped at the Company's hall. Until the year 1854, no gold of less than 18 carats was stamped with the assay mark; but, in that year, gold was permitted to be made of 15 carats, 12 carats, and 9 carats, any of which could be marked; and this has for some years given rise to much confusion and cheating on the part of dishonest tradesmen, who could represent an ornament to be "gold" and "hall-marked" when it was more than half alloy. It is now proposed, however, to go back to the old practice of not marking any gold of less than 18 carats, but at the same time permitting the manufacture of articles of any lower quality of gold, on condition that its true value shall be stated to purchasers at the time of its being sold.

Before a goldsmith can commence business, he must register his name and place of abode, and also the particular initials or monogram he intends to use in stamping the articles that he takes to be assayed at Goldsmiths' Hall. The assaying is generally performed by scraping a small quantity of the metal and weighing it, then refining it from the alloy, and weighing it again. If the test shows the article to be of less

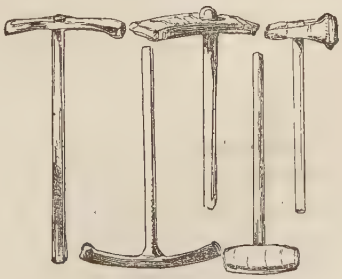
value than is represented, it is cut through and returned ; while, if any intentional fraud be detected, it is entirely forfeited.

Considerable attention has been directed to this subject by Mr. Edwin Streeter, the well-known jeweller of Conduit-street, who has published in a few pages some very good advice to purchasers of gold ornaments, as well as a description of the machine-made jewelry, the manufacture of which he has promoted ; and it would appear that the Goldsmiths' Company have already discontinued the marking of gold chains which are not of a certain value. In the case of silver, no mark is affixed unless the article be of standard value, that is to say, unless it consist of eleven ounces and two pennyweights of pure silver to the pound troy, leaving only eighteen pennyweights for alloy ; and being worth from 5s. to 5s. 2d. an ounce.

It is time, however, that we said something about the work of the goldsmith ; and the subject is certainly a wide one, even if we only have regard to the antiquity of the art of fashioning vessels of gold and silver. All ancient history contains references to ornaments and utensils of gold and silver ; and the enumeration of the elaborate goldsmith's work of the temple and the sacred vessels shows that a high degree of perfection must have been attained at that time in the manufacture of such articles as are still in use under the name of plate. It is evident, too, that the processes employed have undergone comparatively little change, since the greater number of articles now in use are manufactured by hand, and by means of the hammer and anvil, or what is called the

Horse.

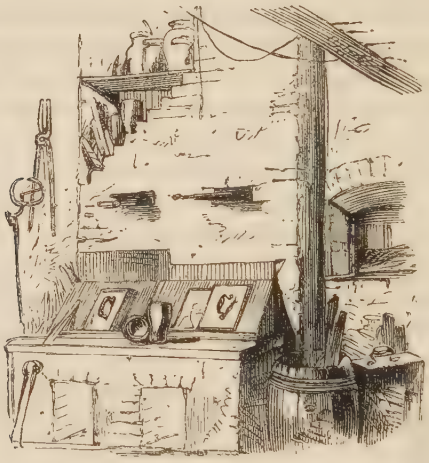
Gravers.



Hammers.

horse, which is a kind of anvil on which vessels of gold and silver plate are shaped, in a similar manner to those of commoner metal. In fact, the manufacture of a large golden vase is at first not altogether unlike that of an ordinary saucepan ; but of course the operations are more carefully conducted, and the final processes of decoration, which give it

artistic form, are of another kind altogether, requiring the use of the graver, the mould, or the stamping-press and dies. The great value of the material in working in gold also renders it necessary to provide for the careful preservation of the particles that are removed even by polishing, so that the aprons, leathers, and other articles of the kind in use in a goldworker's shop all become valuable in the course of time, in consequence of the gold which has accumulated on them by friction. These leathers, &c., are ultimately sold, and the particles of gold recovered from them ; and, in a jeweller's workshop, even the very water in which the workmen wash their hands is put aside to settle, and gold is found in the sediment, and recovered by placing the sediment itself in a crucible, and melting it in a furnace, where the dirt is burnt away.



Furnace.

Where steam machinery is not employed, the striking of gold ornaments from dies is generally effected by an instrument something like what in engineering is called a monkey-hammer, but is known in the goldsmith's trade as a "drop-down" or monkey-press ; in this way sufficient force can be obtained to stamp out the patterns for different kinds of ornaments ; and, though various tools have to be used in goldsmiths' work, such as lathes, for finishing and polishing, vices, rollers, hammers, punches, files, &c., most of them of small size, a very large proportion of work that was formerly done by hand is now effected by means of dies and improved machinery for stamping.

This is especially the case with respect to the manufacture of those articles which are worn as ornaments, and are called jewelry : and,

though it cannot always be said that the brooches, bracelets, earrings, and other ornaments produced by the more modern process, are always equal in beauty and finish to those which are made by skilled workmen in the old fashion, they are certainly lower in price, and the best of them are not easily distinguished from the hand-made specimens.

When a workman is required to fashion an article of jewelry by hand, the requisite quantity of gold is weighed out to him in a piece of about a quarter of an inch in thickness: this piece would then have to be hammered till it was thin enough for the purpose, and after it had been cut into the required strips by the shears, the various parts of the ornament would be formed by the tools, such as drills, files, pliers, the sparrow-hawk, which is a kind of miniature anvil, and other instruments adapted to the purpose. The large ornamental portions would be modelled by means of the hammer, chisel, and graver, and the parts

Shears.

Pliers.

Sparrow-hawk.

would then be fastened together by solder, which is an alloy of metals used for joining other metals, that for fastening gold consisting of fine gold, silver, and copper. The solder is melted on the metal to which it is to form a fastening, and is therefore composed partly of some of the same metal and partly of more fusible metals. It is melted by means of a blowpipe operating on a jet of flame, or on a piece of ignited charcoal, and a portion of borax or sal-ammoniac is added to it to keep the surface of the metal free from oxide, by excluding the atmospheric air during the operation. Of course considerable time would be required for these processes, and machinery has been brought into operation for effecting them with less manual labour. Even in hand-made jewelry the gold is now prepared by a rolling-machine instead of being hammered, and a cake of gold can be rolled to almost any required thinness in a few minutes, by being passed between cylinders which squeeze it to an even band, so that any portion of the thin plate can be cut into short narrow strips as required, by means of a cutting machine worked with a

powerful lever. Dies so formed as to stamp out, not only the decorative portions, but the various parts of the body of the ornament itself, such as the plate of a brooch, or the band of a bracelet, are placed in the monkey-press, and by their means the gold is formed into the required shape with the greatest facility, all that remains to be done being to join the separate portions properly together, and to finish the whole by means of fine tools and polishing.

For the manufacture of gold wire, which is extensively used in the ornamental portion of jewelry, a draw-bench is necessary: and the process is known by the name of "wire-drawing." In early times the slender rods of metal, known to us as wire, were probably formed by first hammering the metal into thin plates, and then cutting the plates into fine strips, which were afterwards rounded by the hammer and file. At one time, indeed, the makers of wire were called wiresmiths, but sometime in the fourteenth century, what is called wire-drawing was invented, and the first wire-mill in England was set up at Sheen, near Richmond, by a Dutchman, in 1662.

Wire is now drawn by being passed through what is called a draw-plate, which is generally a plate of hard shear steel, about six inches long and an inch and a half thick, flattened on one side, and a little thinner at each end. This plate is pierced with several holes of conical shape—that is to say, the orifices are larger on the flat side of the plate than they are on the other side, so that the wire becomes smaller as it is dragged through them. In drawing wire by hand, the draw-plate is laid against two upright supports, fixed on a bench or table, and the extreme end of the wire to be drawn, having been reduced so that it will pass through the hole, a small portion is drawn through by means of a lever, and is attached to a cylindrical drum mounted on an upright spindle. The workman then takes in one hand the coil of thick wire which is to be reduced, and in the other a lever, by which he turns the drum, forcing the wire through the holes, and winding it on the drum by the same action. The size of the wire is measured by means of a gauge, which consists of a plate of steel, with a series of deep notches or slits at each edge, varying slightly from each other in width, and numbered according to the size of the wire which they represent.

It will thus be seen that the art of the goldsmith is one requiring great skill and the highest degree of taste, and while the tools in use for hand-made ornaments are in themselves simple, the beauty of ornaments manufactured by machinery depends rather upon the designer and the die-sinker than on the jeweller, who has little to do except to complete the mechanical operations.

There is another part of the jeweller's business, however, which is extremely interesting, one indeed from which the name of his trade seems to have been taken,—the adaptation of precious stones and gems to the purposes of ornament, and setting them in gold or silver, so that they may be worn about the person.

The preparation, assortment, shaping, cutting, and polishing of the jewels themselves, is the business of the lapidary; but it is desirable for the jeweller to be a good judge of the different kinds of stones and gems, and of their value according to size, purity, and colour.

The value of some of the stones used as jewels varies considerably, according to the fashion, and the consequent demand for them; but the more costly kinds have a standard of value which is generally maintained, and some of the finest are so rare that certain suites of jewels or stones, remarkable for their size and brilliancy, and therefore enormously valuable, have become historical, and are identified with the fortunes of emperors, kings, and the powerful families of the aristocracy in various countries.

The stones used as ornaments are not all of them valuable, since some of them are common enough, and are either chosen for their beauty of appearance and easy adaptation to jewelry, or for their resemblance to those that are more costly. The principal precious stones may be said to be Amethysts, Aquamarines, Beryls, Chalcedony, Diamonds, Emeralds, Garnets, Opals, Onyx, Pearls, Rubies, Sapphires, Turquoise, and Topaz; and of these the most valuable is the Diamond, of which there are several kinds, varying not only in size and shape, but in lustre and colour, from pure brilliancy to delicate rose, blue, green, or pale yellow tints. The diamond, when perfectly pure, is as transparent as a dew-drop, and is then in fact known as a diamond of the first "water," and as it decreases in transparency and brilliancy, it decreases in value, and is of the second, third, or fourth water, until it becomes actually coloured, when its value begins to increase again in proportion to the intensity of its particular hue; fashion having sometimes chosen coloured diamonds even in preference to the pure first-water stones, which are always the most valuable. It is now pretty well settled that diamond is crystallized charcoal, and experiments have been successfully made by which these precious stones were again reduced to their charcoal form, but up to the present time nobody has discovered the secret of crystallizing charcoal into diamonds, an operation which would probably very soon reduce the value of the jewel, unless the process itself were found to be so expensive as to render the manufactured article dearer than the natural production. In India, the East India islands and the Ural

Mountains, are found the larger number of diamonds, which are usually discovered in the alluvial deposits of gravel or sand, sometimes in the form of many-sided crystals, but more frequently with rounded surfaces, and looking uncommonly like those rather transparent flinty pebbles sometimes seen on the sea-shore, and still more resembling a bit of glass that has been washed and washed by the waves among the sand and pebbles of the beach until it is ground into a rounded shape. The finest diamonds are made into "*brilliants*," that is to say, in order to reflect the light, and sparkle with greater lustre, they are cut with curvilineal faces both at top and bottom. Others are cut into what are called "*rose diamond*," which does not mean that they are rose-coloured, but that the top surfaces are cut into a number of triangular faces, and the under surfaces made quite flat. The flawed, or black and dirty diamonds are crushed to powder and used for polishing others, while broken portions are fixed into glaziers' pencils for the purpose of cutting glass. As the diamond is the hardest substance known, it is extremely useful for this and many other purposes, and can only be polished with diamond dust or powder; hence the saying "diamond cut diamond." The celebrated Koh-i-noor, when it was first discovered, only resembled a lump of dull glass; but there was a gleam in it which would have told an experienced jeweller something of its true value, and when it was shown at the great Exhibition of 1862 as a specimen of diamond-cutting, although to the inexperienced eye it looked very little different from the glass model, there were real differences that would have been discovered if visitors had been permitted to remove it from its case, and turn its facets to the light. The Koh-i-noor, however, was large and costly, but by no means the most brilliant and valuable diamond known. That which was brought from Brazil to the King of Portugal is uncut, and its value is said to be above five millions sterling; but in fact these enormous precious stones may be said to be worth any money you like to mention, because of their being so extremely rare that their price is not easily to be computed, since the value of precious stones increases in an enormous ratio according to their size, although the actual value is supposed to be at so much per carat, or $3\frac{1}{6}$ of a grain Troy. The Portuguese diamond weighs 1,680 grains, and another celebrated stone belonging to the Russian crown weighs 195 carats, while the Great Mogul, which is a superbly-cut diamond, weighs 280 carats.

The most perfectly brilliant and beautiful diamond yet discovered, is that known as the Pitt diamond, which was brought from India by a gentleman named Pitt, who sold it to the Duke of Orleans for £100,000, its weight being 136 carats. The Nassau diamond, taken with the

booty at the Deccan by the army under the Marquis of Hastings, is of the purest water, and weighs 357½ grains, but it was sold for £7,200; and the Russian diamond itself, which is said to have been stolen from a Brahminical idol by a French soldier, who escaped with it, and at last succeeded in selling it to some one who, in his turn, sold it to the Empress Catharine, was obtained by her for £90,000, and a life pension of £4,000 a year.

It will be seen from these few remarks about diamonds, that the most celebrated jewels are intimately associated with history, and indeed the stories of precious stones form some of the most interesting narratives in the world.

Along with the Koh-i-noor in the Exhibition of 1862, the Queen placed three magnificent rubies taken from the Treasury at Lahore; they were mounted as a necklace in gold and enamel in the Indian style, with a large pendant of diamonds, and formed one of the most splendid jewels ever worn.

The red sapphire or oriental ruby comes next to the diamond in point of value. It is the exquisite blue sapphire, however, which is known by the name of "sapphire" to the jeweller, and there is another variety of a fine yellow colour known as the oriental topaz. These jewels, like diamonds, are crystals, but of alumina instead of charcoal, and are very much the same kind of substance as emery—which takes its name from Emeri, in the island of Naxos, and is used in powder for cutting gems, since it is as hard as any of the precious stones except the diamond. The common ruby is found in the river sand at Ceylon, Pegu, and Mysore—and varies in colour from the *rubicelle*, or yellowish red, to the *balass*, or rose-coloured, and to the *spinelle*, or scarlet ruby. The topaz, too, which always looks the colour of wine, differs in hue from the amber tint of hock to the darker lustre of old Madeira.

The garnet, which belongs to the same class of jewels, is not of very great value in its common varieties, but the bright red carbuncle, almandine, or "precious" garnet, is both beautiful and costly, and the blood-red pyrope, found in Germany and Ceylon, is acknowledged among the precious stones, while the common sort, which is dull in colour and not transparent, is not much esteemed. One of the loveliest of all gems is the emerald, brought from Peru and Brazil; although the ancient emeralds came, it is said, from the mines of Upper Egypt; the true emerald, however, is not perfectly green, being in fact tinged with yellow or blue, and there are also some specimens which are altogether without colour. The green variety is properly called beryl, and a still more precious description of beryl is the Aquamarine, found in Brazil,

the ordinary beryls coming also from Siberia, France, and the United States.

The amethyst was at one time a favourite jewel, and though the fashion of wearing it in ornaments seems to have declined for a time, it will probably revive, for the brilliant and beautiful colour of this gem, as well as its ancient reputation, must keep it among the more favourite jewels.

In ancient times peculiar virtues were attributed to precious stones, either because they were symbolical of different excellent qualities, or because they were believed to possess certain properties which enabled those who possessed them to avoid some dangers. Thus some were esteemed because it was thought that if they were placed in a cup of poisoned drink, either the drink or the gem would change colour; others protected their wearers from enchantments and spells; and some very special gems were supposed to have been invested with magical virtues, so that they had a general influence on the safety of their owner. The amethyst was believed by some of the ancients to prevent intoxication, and the Persians, therefore, had cups made from it. Its name, from the Greek *amethystos*, is derived from this superstition, the origin of which is difficult to discover. Perhaps the amethyst cups were necessarily small, and the guests who drank from them were bound by etiquette not to fill more than a certain number of times, so that whoever was honoured with one of these costly vases remained sober; or we may guess at another solution. The amethyst is itself of a rich wine-colour—a beautiful brilliant violet-purple—and at a banquet there would be some difficulty in telling the difference between an *ordinary goblet* full of wine and an *empty* cup of wine-tinted amethyst, so that the wise and sober guests might drink very little from their precious cups, and yet the cups appear to be always full.

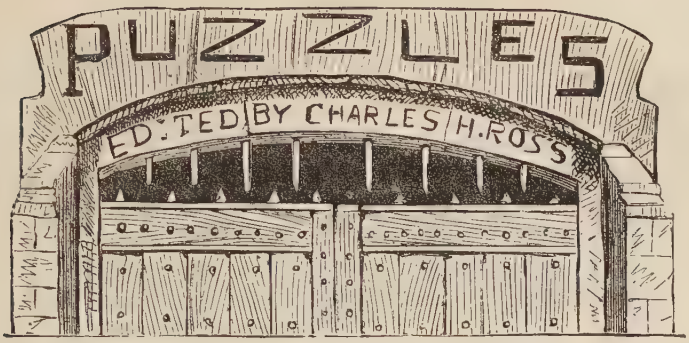
The amethyst is pure rock crystal, and is found principally in India, Brazil, Germany, Spain, and Sweden. Opal and carnelian are the most valuable of a number of stones which can scarcely be called jewels, including agate, chalcedony, sardonyx, and jasper, and are varieties of quartz. Some of the oriental opals, however, are rare, and of great value, and were held in high esteem in very early times. One of the most beautiful and the most curious is called the *cat's-eye* opal, and has received that name from the peculiar changeable greenish light which seems to glimmer in it, just as we may see the light gleam in the eye of the cat. This curious stone, which is composed of a kind of quartz containing some threads of asbestos, is found principally in Ceylon, and rare specimens have been known to fetch considerable prices.

The art of forming jewelry and setting precious stones in such a manner as will best display their peculiar properties, is one requiring no little skill as well as an acquaintance with the effect produced upon the gem by its setting; no less difficult is the art sometimes practised, of embellishing with jewels vases and cups of gold or silver; but this is perhaps more the work of the goldsmith than that of the jeweller, and may be deemed a departure from the strict canon of his art, which prescribes chasing and engraving as the fitter ornaments for the articles he manufactures.

In speaking of engraving we had occasion to allude to the celebrated artists who wrought designs upon precious metals, and there is a long list of names of men who from the earlier ages of the world's history were engaged in this work. Perhaps foremost amongst them all is that of the famous Benvenuto Cellini, who may be said to be the fitting representative of goldsmiths and jewellers.

Cellini, who was born at Florence on the 1st of November, 1500, was intended by his father for a musician, but he had such a taste for drawing and modelling, and such an ardent desire to become a sculptor, that his father (as the best thing he could do with him) placed him with a jeweller named Baccio Bandinelli, in whose service he remained for two years, after which he removed to the shop of Antonio Marcone. Cellini was of a wandering disposition, however, and, in the fashion of those times, made his way to Sienna, Bologna, Pisa, and Rome, working at each place until he got tired of it, and then moving on. He was only nineteen when he paid his first visit to Rome, but he returned in 1524, and had already acquired such skill as an ornamental jeweller that he was employed by Pope Clement VII. and several of the nobility. He took part in those disturbances which took place during the siege of the city by Constable Bourbon, and, according to his own account, it was he who shot that commander as he was scaling the walls. The times were too violent for peaceful arts to flourish there, and the school of Raphael being broken up and the artists generally dispersed, Benvenuto returned to Florence, where he remained, with occasional visits to Mantua, until 1529, when he was recalled to Rome by the Pope, and employed not only in the manufacture of jewelry, but in making dies for medals and for the mint. He was also appointed mace-bearer to his Holiness, and might have lived a peaceful and profitable life, but for his irritable and changeable disposition. He was always quarrelling with somebody, and was often obliged to leave the city to avoid being arrested. In 1534 he actually killed a rival artist, and never seems to have been master of his evil temper and dissipated habits.

In 1537 he visited Paris, and was presented to Francis I., but was back again in Rome the following year, when he was imprisoned in the castle of Saint Angelo, on the pretence made by some enemy that he had embezzled certain jewels. In escaping from the castle he fell and broke his leg, so that he could not get away from the city, and was again arrested when his hurt was cured. After a short imprisonment, the Cardinal d'Este obtained his release, and introduced him into the service of Francis I., who settled on him a salary of seven hundred scudi a year, as well as paying him for all the work he executed to the Royal order. He was then engaged in the decoration of the Palace of Fontainebleau, and the favour he received, as well as his own disagreeable humour, soon made him enemies. This probably caused him to return to Italy, where he was received by the Duke Cosmo de' Medici at Florence, and received from him the order for his great work, the "Perseus," now in the Grand-ducal Palace at Florence. In the year 1554, when this was completed, Cellini intended to become a monk, and had actually passed his novitiate, but two years later he had once more changed his mind and was married instead. So great was his reputation that his name was already included in the list of the Florentine nobility, and in 1561 Duke Cosmo gave him a house in the Via del Rosaio, where he ended his strange life of trouble and dispute on the 13th of February, 1571. He was of quarrelsome and dissipated habits, as may be seen by his autobiography, though he possessed great abilities both as a jeweller and a sculptor. In the latter art (that of sculptor) he was recognized by Michael Angelo himself, who wrote to him with high compliments on the execution of a bronze bust of Bindo Altoviti. His principal work in sculpture, however, is the bronze of Perseus with the head of Medusa,—and of this we have an opportunity of judging, since a fine cast of it may be seen at the Crystal Palace. It was in ornamental work in gold and silver—dishes, salvers, goblets, salt-cellars, and other plate—that he principally distinguished himself; so that he was less a sculptor than a goldsmith and jeweller.



1.

Cryptograph.

Ubgjt zj, zrs cpjsqrqw zl myp bzars,
Lza pipa xjs bza pipa,
Eppcgjt myp mgwp zl uqju xjs umxau
Myp mxaoy mxym pjspmy jhipa.
Dzqa wzjzmzjp ucpxeu fyd xjs tagpl
Xjs lxgfgap xjs pjspxizqa ;
Ubgjt zj zrs cpjsqrqw, mz xjs laz,
Lza pipa xjs lza pipa.
Rzjt xu dz ubgit uyxrr pxame hp toxs,
Xjs whj hp cxamrd tzzs xjs hxs,
Xjs gj pxoy yzqa myxm cxuupu hd,
Myzquxjou zl uzqru hp hzaj xjs sgp.
Sgp lazw myp rxamy, mz rgip bp maqum,
Qjuyxoerps, qjxrrgps bgmy-squm.
Rxjt xu dzq ubgjt uyxrr bazjt ozwp agtym,
Xu uqap xu wzajgit bzrrzbu jgtym.
Myp oxdu tz bazjt, myp xtpa jhipa
Ubgjt zj, zrs cpjsqrqw, ubgjt bza pipa.

2.

Double Acrostics.

1. A man's name.
2. Waste.
3. Just.
4. A small boat.
5. Land.
6. A cordial.
7. Rarely.
8. A bird.
9. A tribe of Israel.
10. A Spanish title.
11. An Indian gum.
12. A sign in the Zodiac.
13. A pagan.
14. An officer of the church.

The *initials* and *finals* will give two parties who took part in the civil war in America.

3.

1. A stone.
2. A notion.
3. A parent.
4. A precious stone.
5. A bloodsucker.
6. A little person.
7. Wicked.
8. Silent.
9. A river in Siberia.
10. Modern.
11. A weed.
12. Conclusion.
13. Eastern.
14. A surgeon's rasp.
15. A beast.

The *initials* will name a well-known character, the *finals* his title.

4.

Something which never can grow old,
A force repelled though very bold,
A shelter for the storm-tossed ship,
An isle where people blood do sip,
A place far famed for ice and snow,
A fish oft found in rivers slow,
A little town in sunny Spain,
A tyrant who once in Rome did reign.
If the *initials* of these names
Be rightly joined, the whole proclaims
The name of one who was the dread
Of many kings who now are dead.
The *finals* read in order tell
The battle where his glory fell.

Transpositions.

5. Be raggy.
6. Ram on-I hum !
7. Groaning-play.
8. She rating ten.
9. Odi as fustiness.
10. Neat heel pin.

11.

Jove hid me once to plague a witty one
In a stone cell securely wrought,
I may peep out on this condition
That I return as quick as thought.
Decapitate and I am courted
By fallow deer and fancy's pride
Behead again read me supported
Above a world where myriads died.

Arithmorems.

12. 518 nlun.
13. 195 liaf.
14. 153 niptea.
15. 150 hua.
16. 258 ooaln.
17. 1107 thaouf.

Decapitations.

18.

Behead what holds a different race than ours
And you will have what's felt when sorrow lours.

19.

Take a weapon, behead it, 'twill show you a part
Where that weapon applied causes people to smart.

20.

Behead what's in the " Young Gentleman " found
And you will get what's kept beneath the ground.

21.

Complete, the kitchen is my station ;
Behead, I am an excavation.

22.

Behead a snare and for your pains
A blow will be your total gains.

23.

Whole I am to echo, beheaded twice I am a fuel, transposed I am a head, transposed again I am sold in drapers' shops, beheaded I am an animal, and transposed I am a vegetable.

24.

My whole is used by painters, beheaded I am a reptile, transposed is fear, beheaded again a bookworm's pleasure, transposed I attempt, transposed again I am expensive, and beheaded and transposed I am the plural of a verb.

Eminent characters.

25. But I'm nameless, seemly led.
26. Order'd Bacchin.
27. Prey be good Age.
28. Carry worn Ball.

29. Dart rob banner.
30. Wicked hands, Loch.
31. L. bear the zebra bitter tart.
32. Fetch in horror. E.

33.

The *initials* and *finals* read downwards will give the names of two battles celebrated in song.

A character in Shakspeare.
The cause of one of the battles.
What took place.
Opposition.
Belonging to you.
What some of the combatants were probably armed with.
A town in a Pacific Island.
What many of the soldiers wore.
What was left on both battle-fields.
What is required to prove the truth of the tale.

34. Charade.

Set my second
On my first;
Then use your poll
To find my whole,
Which does in fact
Mean an attack.

35. Why is the letter R like a spring?
36. Why is an old backslider like a playful discourse?

37. Charade.

Cut out a piece of pigeon pie,
My *first* it then will be;
My *second* may be mountains high,
Or far too low to see.
My *whole* a mark for princes' aim,
Decipher, boys, or let me win the game.

38. Cryptograph.

Msw iswm wml bpwwbl hvcy hll,
Peftsal ljnm cmpqpqo msvt,
Jqe ojwmltpqo msqly jbb wml ijy,
Ktse ldlty sfiqpqo Kvswlt.

39.

A plant.
A preposition.
To lay up.
To wail.

40.

A measure.
Conception.
An oblique look.
A title.

41.

An animal.
Dry.
A kind of grain.
A garden.

42.

So be it.
An animal.
An adverb.
Indigence.

Hidden Towns.

43. Come and sit at our side, dear.
44. Tende: doli circum hæc demum frangentur inanes.
45. Please send the débris to Liverpool.
46. Will you take fat or lean, sir?
47. Buy a box for Dick.

48.

Cryptograph.

Teu fwolte nlopr iga teoig ed ids olor hla.
Hpo gmnoea dpos iwaya adevsh wrd oak esm
Tıne odasnrdtl oetealnyw reshd lsr wmhah ule
Tee teywls nwr hnwlh yd ntaflekh slt er ch.

49.

Cut off my head and I am a king of old; cut off my tail and I am an imperative command; cut off my head and tail and I am the cry of one in pain. My *whole* is a noted giant.

50.

My *first* is a colour, and also a tree;
My *next* is a vowel, as, doubtless, you'll see;
Many poor luckless fish with my *third* have been caught;
My *whole* is of use when a battle is fought.

51.

Double Acrostic.

The *initials* and *finals* read downwards give two proverbs.

1. A division of Palestine.
2. A sect of the Jews.
3. A demonstrative pronoun.
4. A town in Palestine.
5. A pavilion.
6. To grasp (reversed).
7. Pertaining to Ireland.
8. A high priest.
9. Amusement.
10. A kind of pie.
11. Two vowels.
12. A spell.
13. A beverage.
14. A river of England.
15. A country in North America.
16. Home of bees (curtailed).
17. An animal.
18. A river of England.
19. A bird.
20. The French for "here."
21. A girl's name.
22. A number.

52.

I'm found in earth, but not in heaven;
In bread I am, but not in leaven;
In water too, though not in beer;
And, though perhaps 'tis somewhat queer;
I'm in greengage, yet not in jam;
And on the head of every man.

53.

There is a word of plural number,
Foe to peace and tranquil slumber;
Now any word you choose to take,
By adding *s* you plural make,
But if you add an *s* to this,
Strange is the metamorphosis:
Plural is plural then no more,
And sweet what bitter was before.

54.

Part of a common verb.
A town in Russia.
Evil.
Lusty.
A species of horse.
An epoch.
An animal.
Imperceptible.
Obliquely.
Easy.
To trade.

The *initials* will give a country and the *finals* its hero.

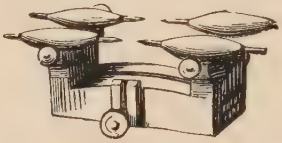
55.

1. In every county I abound,
   In every village I am found;
   Public and private, I am both—
   An enemy to youthful sloth.
2. A noisy animal am I;
   Ye youths can find me if you try.—
   What do you in your mirrors see?
   How very stupid! that is me.
   Join these two words; there will be seen,
   What, probably, you all have been.

56.

I am a word of 11 letters.

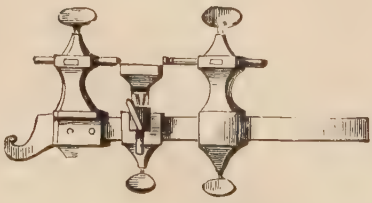
My 6, 4, 2, 8 is a comment.
My 3, 1, 7, 6 is a species of turf.
My 11, 10, 11, 4 is not any.
My 3, 4, 6, 9, 8 is a French word.
My *whole* is to look forward.



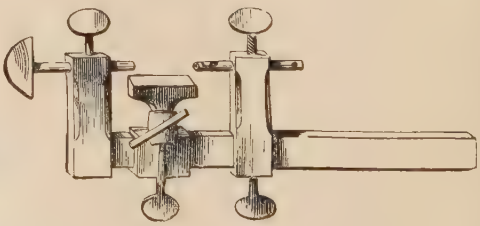
DEPTHING TOOL.

SPRING TOOL.

WATCHMAKERS



SMALL TURNS, FOR FINISHED WORK.



LARGE TURNS, FOR BRASS WORK.

TRADES CONNECTED WITH SCIENCE AND ART.

By THOMAS ARCHER.

WATCHMAKING.

IT will perhaps be useful before saying anything about the manufacture of timepieces, or instruments for dividing periods of time, to refer to the methods employed for that purpose by the nations of antiquity, before the invention of the more mechanical means now in use. In doing so we shall at once discover that the term "watch" was originally used, not for the instrument by which time was measured, but for a period of time itself; indeed the word "hour" by which we generally mean the twenty-fourth part of the period from sunrise to sunrise, or of the day and night taken together, originally meant almost any portion of a day and sometimes the particular season of the year, as may be discovered by references in the Old Testament Scriptures, as well as in Homer and Hesiod. The day was divided into portions, and these portions were frequently called hours; but the Hebrews reckoned the night by four quarters, which were called "watches." These watches, or "greater hours," each contained three "lesser hours." The first watch began at six o'clock in the evening, and lasted till nine; the second terminated at midnight, the third was from midnight till three o'clock in the morning, and the last watch ended at sunrise or six o'clock in the morning. They were commonly known as the "even," or evening, midnight, cockcrowing, and sunrise, or dawning; and it will be found that reference is made to each of these terms in the Scripture nar-

rative. The day was also divided into four quarters, the first beginning at six o'clock in the morning, and known as "the third hour," the "sixth hour," the "ninth hour," and the eleventh hour." These "greater hours" were, as we have said already, divided into the "lesser hours," of which there were twelve in the day and twelve in the night, and the third, the sixth, and the ninth hours were the hours of prayer.

It should be remembered that these divisions of the day varied considerably according to the seasons of the year, and that although the computation of time by the motions of the heavenly bodies, and particularly by the position of the sun, was the first as it is still the only original mode of reckoning; these calculations could only be applied to the longer intervals, and it required the adjustment of machines which would exhibit degrees of mechanical motion to enable us to complete such short divisions of time as hours, minutes, and seconds.

The earliest instruments for this purpose of which there is any record are gnomons or sun dials; the invention of which has been ascribed both to the Babylonians and the Phœnicians; and Homer in the Odyssey speaks of "an island called Syria lying above Ortygia where the revolutions of the sun are observed." The Greeks attribute the introduction of the sun dial to Anaximander who divided the time by hours, and it is known that Anaximander had travelled into Chaldea so that he may have brought the invention back with him. It seems probable that a simple gnomon or dial was in use in very remote times, since it consisted only of a rod or staff set up in an open space where its shadow would fall distinctly, so that its progress from sunrise to sunset could be accurately divided. The more elaborate dial or heliotropion was an index fixed perpendicularly in the middle of a kind of bowl or basin, on which the twelve parts of the day were very exactly divided.

From whatever source the Jews derived their use of the dial, and whether or not they understood its principle before the Babylonish captivity, we find the dial of Ahaz occupying a prominent place in the history of this invention; mention is made of it in the book of Kings; but there seems to be no record of its shape or the manner in which it was constructed, about which there has been a great deal of speculation. Cyril of Alexandria and Jerome both believed that it was a kind of staircase so contrived that the shadows falling on the steps marked the hours of the day; while some others have supposed it to be a pillar set in the midst of a smooth pavement marked with lines or "degrees." Grotius, who quotes Rabbi Elias Chomer, describes it as a concave hemisphere, in the midst of which was a globe, whose shadow fell upon several eight and twenty lines, engraved in the concavity of

the hemisphere. This description comes near to that kind of dial which the Greeks called *scapha* (a boat), or "hemispherion," the invention of which Vitruvius attributes to Berosus, who lived long after Ahaz, but may only have introduced it into Greece from Babylon where he was a priest of Belus, and the compiler of a record of astronomical observations for four hundred and eighty years, commencing at a period previous to the time of Ahaz himself.

For the last two centuries sun-dials have attracted less attention in this country than they formerly did. At one time very few gentlemen's gardens were without an ornamental dial in some sunny spot, and there were several in different parts of London, some of which still remain.

Before the common introduction of clocks, however, it became necessary to devise some method of calculating the time at night, or when the sun was not shining brightly enough to throw a shadow. One of the most ancient contrivances was the *clepsydra* or water clock, which measured the passing of time by the escape of water through a vessel with a hole in the bottom, into a cistern beneath. In the more complete of these water clocks, a float supporting an upright rack rested on the water, and notches in the rack acted on the teeth or cogs of a wheel, from which a pointer projected. As the float descended, the rack gradually turned the wheel and thus caused the hand or pointer to traverse a dial or plate numbered with the twenty-four hours of the day. Another instrument was the sand-glass, with which we are only familiar now in the humble shape of the little household instrument for determining for how long we should boil an egg. The old hour-glasses, however, which are said to have been invented at Alexandria about the middle of the third century, were at one time carried about as we now carry watches, though they must have been rather cumbersome time-pieces; and in later times an hour-glass was almost always placed in a frame in front of the pulpits in churches, in order that the preacher might regulate his sermon. The iron frames or quaintly carved stands for these pulpit hour-glasses are still to be seen in some of the ancient churches, though the use of them almost entirely ceased at the time of the Restoration—the period when by the great improvement in clocks and the more common introduction of watches, both the sun-dial and the hour-glass were superseded.

It is time, however, to cease this preliminary gossip about the ancient instruments, and say something about watch making—a few words about the early introduction of pocket time-pieces, and the art of "horology," and give as brief an account as possible of the operations necessary in the present method of manufacture.

The precise date of the first invention of watches has never been determined, so that the actual inventor is unknown, but it is probable that no individual can be regarded as the absolute inventor, since the progress from the clock of the tenth century, by which time was measured by the action of a descending weight upon a wheel, to the introduction first of more exact and complicated mechanism, and afterwards the substitution of a spring for the weight and line, was too gradual to enable the credit to be claimed by any individual.

Dante, who was born in 1265 and died in 1321, refers to a clock that struck the hours, and Chaucer, who was born in 1328, and died about 1400, says:

> "Full sickerer was his crowingin his loge,
> As is a clock or any abbey orloge."

It may be seen, therefore, that regulated and striking clocks were known very early in the fourteenth century, and it is evident from all kinds of references that they became common all over Europe before the year 1500.

It is certain also that the mechanical principles on which the primitive clocks were founded were successively applied until a certain degree of exactness was obtained, from the wheel work which was known and used by Archimedes to the weight, the ratchet wheel, and click, the balance to regulate the falling of the weight, and the dial plate on which the pointer marked the motion in accordance with the hour of the day.

The earliest kind of clocks, then, consisted of a "pinion," or small toothed wheel, the end of the axle of which was a square piece of steel, to which a "key" could be fitted in order to turn it. This pinion was connected by means of its teeth to another larger toothed or cogged wheel fastened to a "barrel" or cylinder, round which the string or chain bearing the weight was wound by turning the pinion with the key. While the chain was being wound, the barrel was prevented from unwinding by another small wheel called a "ratchet," which acted by means of a "click" or moveable lever on a still larger wheel at the other end of the barrel; when the weight was wound up, however, both the large wheels already mentioned and the barrel turned on their common pivot. This motion was communicated to another wheel connected with the hand pointing to the dial plate, and also to an entirely different wheel like a saw bent into a circle with the teeth inwards. This was called the "escapement" wheel, and with the balance and verge was the true regulating power of the clock. It is

evident that without some contrivance to prevent it, the weight would have descended more quickly in proportion to the length of the line let out from the barrel, and no regular measurement could have been secured, since in a few moments the weight would have run down. To obviate this an upright spindle was placed in such a position that the teeth of the escapement wheel would catch two projecting portions called pallets, which exactly fitted into the interstices of the saw-like teeth. Every time that the wheel caught one of these "pallets" its motion was retarded, while the spindle in turning also turned a weighty balance which was fixed to its upper part, and this had the effect of bringing the second pallet round to the edge of the wheel to be acted on in its turn. Thus the "balance" was thrown backward and forward by the action of the "escapement," and the pallets retarded the motion of the escapement wheel in an equal degree, answering to the beats of the pendulum of more modern clocks, or the ticking of a watch.

This principle, rough as it may seem, is really the germ of horology, and even in the most finished watches of the present day, with all their exquisite machinery and wonderful accuracy, the balance, cylinder, weight, cord, and escapement are there represented by wheels, the fuzee, barrel, chain, springs, and levers. A watch is in fact a clock which will keep going in any position, and to make it do so it is necessary to substitute wheels and springs for balances, weights, and pendulums; but whereas the ancient clocks, and the ancient watches too, were very irregular, and in consequence of the rudeness of the machinery would not accurately measure small portions of time like minutes and seconds, we have now instruments which, by means of "compensating" balances or wheels, are brought to the finest adjustment, so that even parts of seconds may be accurately noted. Without entering into the forms and uses of the numerous intricate and delicate parts of a modern watch, then, the difference between a clock and a watch may be taken as thus stated by Dr. Arnott. A watch differs from a clock in its having a vibrating wheel, instead of a vibrating pendulum; and as in a clock gravity is always pulling the pendulum down to the bottom of its arc, which is its natural place of rest, but does not fix it there, because the momentum acquired during its fall from one side carries it up to an equal height on the other—so in a watch, a spring, generally spiral, surrounding the axis of the balance wheel, is always pulling this towards a middle position of rest, but does not fix it there, because the momentum acquired during its approach to the middle position from either side carries it just as far past on the other side, and the spring has to begin its work again. The balance wheel at each vibration

allows one tooth of the adjoining wheel to pass, as the pendulum does in a clock, and the record of the beats is preserved by the wheel which follows. A *mainspring* is used to keep up the motion of the watch, instead of the weight used in a clock; and as a spring acts equally well, whatever be its position, a watch keeps time, though carried in the pocket, or in a moving ship. In winding up a watch one turn of the axle on which the key is fixed is rendered equivalent by the train of wheels to about four hundred turns or beats of the balance wheel; and thus the exertion, during a few seconds, of the hand which winds up, gives motion for twenty-four or thirty hours.

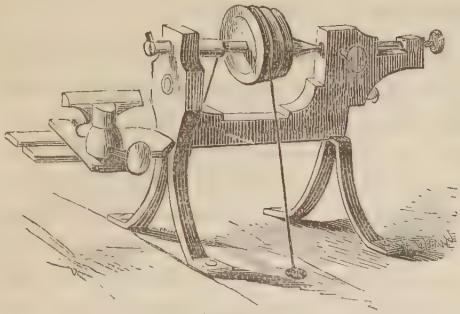
It will easily be seen that after the first invention of a watch the improvements were mostly directed to overcoming the friction and want of free motion which made the action of the escapement irregular, and this was a matter which affected the whole mechanism. The spiral springs used for escapements are of two kinds, the common one lying in one place, and the other sort, which is generally used for chronometers (where size is of less importance), resembling a wire wrapped round a cylinder, just as the string of a clock is wrapped round the barrel.

The springs of watches are now of such exquisite fineness, that four thousand of them do not weigh above an ounce, and are worth one thousand pounds; and this will shew how greatly the value of even a common piece of steel may be increased by the art which is exercised upon it in the process of manufacture. It is by means of this spring that watches are regulated by altering the point at which it begins to bend.

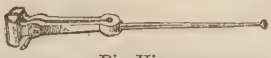
In order to remove friction and make the working smooth, the holes on which the machinery of a watch moves are jewelled—that is, the pins or turning points are made of jewels, and in the best watches the pallets are also made of jewels.

The various descriptions of watches are known by the difference in their "escapements;" that is to say, by the combination of those parts which serve to convert the circular motion of the wheels into a vibratory motion like that of the balance and the pendulum in clocks. These parts include the escape wheel, and all those portions lying between it and the balance.

In what is called a "vertical" watch, the barrel containing the spring is near one edge, and next to it is the fuzee. The spring within the barrel, formed by a strip of highly tempered steel, is fastened at one end to the interior of the barrel, and at the other to the "arbor," or axis of the barrel. A fine steel chain runs from the exterior of the barrel to the exterior of the "fuzee;" and when the watch is wound up, by the



Lathe.



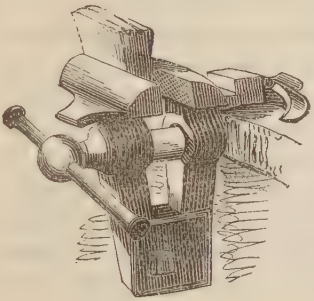
Pin Vice.

Clamp.

Callipers.

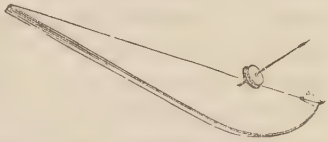
Filing-block.

Eye-glass.



Hand-vice.

Pliers.



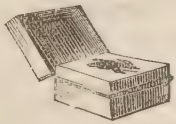
Drill-bow.

Hammer.

Augering-iron.

Nippers.

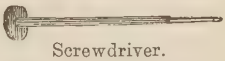
Compass.



Polishing-box.

Tweezers.

Drill Stock and Drills.



Screwdriver.

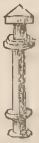
Pendulum-spring Sliding-iron.

Blowpipe.

Flat File.

Rat's-tail File.

Broach.

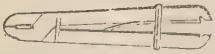


Bolt.

Gooseneck File.

Broach.

Sliding-tool.



Sliding-tongs.

Graver.

TOOLS USED IN WATCHMAKING.

application of the watch-key to the "arbor" of the fuzee, the chain is drawn from off the cylindrical surface of the barrel and wound on the grooved surface of the fuzee. In this process, the spring within the barrel becomes coiled round very tightly, and it is the recoil or resistance of the spring which slowly pulls the chain back again to the barrel, and causes the fuzee to rotate. The fuzee is concentric with a toothed wheel, whose teeth act upon the teeth of a second wheel, and those upon a third, and so on throughout the delicate machine; one wheel rotating with such a velocity as to enable an index hand upon its axis to mark hours, another minutes, and another seconds, while another acts upon the regulating or pendulum apparatus. The duplex escapement, so called from its French inventor, is an intricate and exact arrangement of the escapement—the horizontal watch has the escapement parallel with the face of the watch itself; while the lever is altogether different, and is generally considered superior to all the others. There have been, also, various inventions, such as "detached escapements," for diminishing the friction and obtaining perfect regularity, and compensative balances have been adopted even to allow for variations in temperature, so great has been the improvement in this manufacture.

An ordinary watch when taken to pieces consists of seventy-five parts, besides about eighteen screws; and it is not now the business of the manufacturer to make all these separate portions. They are made, most of them, by machinery, and the watchmaker fits and adjusts them. They may be said to be the raw material of the watch, just as brass, steel, gold, and jewels are the raw material from which they are made. Great improvements have been introduced into common watches by the accuracy with which these separate parts are made by ingeniously constructed machines, so that they may be readily fitted together, and a large number of very fair watches are now sold at a small price—being principally made in Swiss workshops and imported into this country; but the best watches require very patient and laborious fitting, the parts having to be, as it were, re-made by the careful use of tools to adapt them with sufficient exactness to produce a perfect combination.

Our readers will see that it would be impossible to describe the various processes necessary to effect this object, since all kinds of operations in metal working may be required. To return for a minute to the antiquity of watches—the first seems to have been made at Nuremberg, always a great place for mechanics. They were called from their shape "Nuremberg Eggs," and were enclosed in circular metal cases in

which they hung from the girdle. First steel, and then brass and steel, were used for the works, and it soon became a fashion to make the cases containing watches into all kinds of graceful or grotesque forms. Thus eagles, ducks, St. George and the Dragon, skulls, and highly ornamental and richly-chased crosses, medals, and lockets came into use, and the trade of the jeweller and goldsmith was added to that of the watch-maker and horologist.

KEY TO PUZZLES ON PAGES 316—320.

1. Cryptograph.

Swing on, old pendulum of the world,
For ever and for ever,
Keeping the time of suns and stars—
The march that endeth never.
Your monotone speaks joy and grief,
And failure and endeavour.
Swing on, old pendulum, to and fro,
For ever and for ever.
Long as you swing shall earth be glad,
And men be partly good and bad;
And in each hour that passes by
Thousands of souls be born and die,—
Die from the earth, to live, we trust,
Unshackled, unallied with dust.
Long as you swing shall wrong come right,
As sure as morning follows night.
The days go wrong, the ages never,—
Swing on, old pendulum, swing for ever.

2. JeffersonDavis—Abraham Lincoln.
3. Simon de Montfort—Earl of Leicester.
4. Napoleon—Waterloo.
5. Beggary.
6. Harmonium.
7. Organ-playing.
8. Threatenings.
9. Fastidiousness.
10. Elephantine.
11. Spark.
12. Unenlightened.
13. Influentially.
14. Parenthetical.
15. Faithfully.
16. Technological.
17. Vouchsafement.
18. Spain.
19. Whip.
20. Tale.
21. Spit.
22. Trap.
23. Repeat.
24. Ladder.
25. Miss Menella Bute Smedley.
26. Richard Cobden.
27. George Peabody.
28. Barry Cornwall.
29. Bernard Barton.
30. Sheldon Chadwick.
31. Elizabeth Barrett Barrett.
32. Henri Rochefort.
33. Chevy Chase — Otterburne.
34. Onset.
35. Because it is the beginning of a river.
36. Because it is bad-inage (badinage).
37. Partridge.

38. Cryptograph.

How doth the little busy bee
Improve each shining hour,
And gather honey all the day
From every opening flower.

39. Rush
unto
stow
howl.
40. Mile
idea
leer
Earl.
41. Mare
arid
rice
Eden.
42. Amen
mole
else
need.
43. Tours.
44. Turin.
45. Bristol.
46. Orleans.
47. Oxford.

48. Cryptograph.

The curfew tolls the knell of parting day,
The lowing herd winds slowly o'er the lea;
The ploughman homeward plods his weary way,
And leaves the world to darkness and to me.

49. Gog.
50. Bayonet.
51. *Initials*—Set a thief to catch a thief.
Finals — A stitch in time saves nine.
52. Ear.
53. Cares—Caress.
54. Switzerland—William Tell.
55. Schoolboy.
56. Expectation.

Stephen Scudamore the Younger;

OR,

THE FIFTEEN-YEAR-OLDS.

A STORY OF BOYS' ADVENTURES AT HOME, ON BOARD A PASSENGER SHIP, AND ON THE AUSTRALIAN GOLD-FIELDS.

By ARTHUR LOCKER.

PART IV.

Captain Staunton's Proposal.—Selling a box of clothes.—Disappearance of Donnithorne.—A scene at the Melbourne Hospital.—We drink Mr. Gregory's health.—Prawle is taken in and done for.—Clutterbuck's Boarding-house.—Shying a boot at the crazy Doctor.—The first Day in a Tent.—A Picnic Dinner.—Fetching wood and water.—The Woman of the Tree.—I am benighted.—A Shot from a Revolver.—Quarrel between Prawle and the Greenwich Man.—The Reconciliation.—A Visit from a supposed Bushranger.—The story of the Woman of the Tree.

THE *Ruth Hayward* had lain at anchor for several days in Hobson's Bay before I had any chance of getting ashore. After three months at sea it was rather tantalizing to be within sight of Australian houses, to be able to see Australian colonists walking about the beach, and to be eating bread baked only the day before by Australian bakers, and yet to be still confined to the narrow limits of the ship. But although the passengers were rapidly leaving us, and although very few stores had to be served out, there was still a good deal of work to be done in our department. The accounts had to be made up carefully, so as to show the exact amount of money which we had received by our sales, and the precise quantity of stores still remaining on board the ship. As provisions of all sorts were very dear in Port Phillip, Captain Staunton proposed to sell the greater part of his surplus stores to a ship-chandler in Williamstown, and of course it was necessary to know the quantity

which he had remaining. Mr. Hennessy was a very conscientious man; he had been brought up as an apprentice on board Messrs. Hayward's ships, and he would have considered it an act of ingratitude to quit the vessel until he had left everything under his charge in apple-pie order. Otherwise I know that he was longing to get away, for, as I have already observed, he was going to give up the seafaring profession, and join a brother who had settled in the colony as a farmer. But although we were still confined to the ship, we heard a good deal of news from the shore, as passengers were perpetually coming and going until they had got all their baggage away. As for Prawle, he got his discharge the day after our arrival. Anybody could serve out the small quantity of water which was now wanted, so that his services were no longer required. Captain Staunton, of his own accord, wrote out a testimonial stating that John Prawle had discharged his duty satisfactorily. Prawle was much pleased upon receiving this document, stowed it away in his safest pocket, and then came and bade me good-bye, saying that he would return in a day or two, and tell me all the news. I knew that he had picked up some friends among the passengers in the intermediate cabin, with whom he went ashore, but I will say no more about them now, as I shall have to speak of them again presently.

Now you must not imagine that I was going ashore in a strange country a poor, friendless lad, with nothing but Mr. Hayward's ten sovereigns in my pocket, and a bill for twenty pounds on the Union Bank of Australia, which my father had sent me just before I sailed. Even with thirty pounds in my pocket, I should not have been badly off, compared with some of our passengers, who after paying the steamboat fare up the river, had not a sixpence left, but I possessed other advantages besides these, and you will presently be able to judge how wisely and prudently I behaved. One afternoon Captain Staunton was meditatively pacing the quarter-deck—he had been on shore all the morning—when seeing me in the act of locking the storeroom door, he called me to him :—

"Have you finished all your business, Scudamore?" he asked.

"Yes, sir; all except some accounts, and Mr. Hennessy hopes to get them completed to-night."

"Then you'll be ready to go ashore to-morrow?"

"If you please, sir."

"Now I want to say a word to you, my lad. I've been to Melbourne half a dozen times before now, but I never saw it in such a state as it is at present. These gold diggings have turned everything topsy-turvy. It's a queer place for a boy of your age to set foot in all by himself."

"I have a friend, sir."

"Who?"

"John Prawle," said I, colouring.

The captain laughed. "What! that long-legged youngster that used to serve out the water? He seems a steady lad, but he is scarcely old enough to look after himself and you too. Are you going gold-digging?"

"We mean to try, sir."

"Take my advice, and don't try. You've been too softly brought up, both of you, for such work. It's only fit for railway navvies, and jack-tars. Now, I'll tell you something. Mr. Hennessy is not a man of many words, and he says you have done your duty very well. Consequently, I mentioned you to our consignees, Messrs. Turnbull & Anderson, this morning. They want a smart lad who can write and cipher. Would you like to go into their office?"

I hung down my head, and did not speak for some seconds. Wherever I went I seemed to be pursued by pen, ink, and paper. At last I stammered out, "Thank you, Captain Staunton, very much, but I'd rather not be confined to a desk. I'd rather work in the open air."

"Just what I expected," he replied, good-humouredly. "Then I'll make you another offer. Would you like to take the round voyage with me, go up to Calcutta, and return to England? You can mess with the other apprentices, and learn all that they learn."

"I would sooner do that than sit in an office, sir; but—but—"

"But what?"

"Well sir, I've promised Prawle—"

"What makes you so fond of Prawle?"

"I don't know, sir. I like him very much."

"And what have you promised him?"

"To stick by him as long as we're in the country."

"Preserve us!" cried the captain, laughing. "What a pair of babies you'll be among all these sharpers and villains! Well, I can't keep you on board against your will, or else I would. You must choose your own way. But in case you ever want a friend, I'll give you a letter to Mr. Walter Turnbull."

"Thank you, sir."

That evening Prawle returned on board, full of stories. "You can't think what a rum place Melbourne is, Stephen," he said. "It was built to hold five-and-twenty thousand people, and contains eighty thousand. Consequently, a bed is not to be had for love or money. Even the Governor, I am told, has his house full of lodgers, and the

Chief Secretary roosts out of window, at the end of a long pole. A cauliflower as big as your fist is worth three shillings, butchers' meat is twopence a pound, and if you stir out after dark with money in your pockets, you are sure to get robbed. It's a beastly hole. Everybody says the diggings are better than Melbourne, so we must start as soon as we can, but just now the roads are up to the bullocks' necks in mud."

Prawle was rather prone to exaggeration, but I afterwards found that there was a good deal of truth in his description.

That evening Mr. Hennessy told me that he was going ashore the next day on business connected with the ship, and that Prawle and I might go with him if we pleased. I need not relate here how sorry I felt when the time came for bidding good-bye to our staunch old ship, which had carried me safely for sixteen thousand miles, to say nothing of separating from the friends I had made among the officers and crew. Directly after breakfast I got my luggage on deck, and Prawle and I held a solemn consultation over my boxes. "I say, Stephen," he said, after inspecting the contents of my largest box, "you've got a jolly lot of things; they'd be no end of use in a civilized country, but here I don't know what you'll do with them. You can't lug that great chest up to the diggings, and the warehouses are all stuffed chock-full to bursting with luggage and emigrants' goods."

"Ah! you're right there, mine yong friend," said a dark-complexioned hook-nosed man, who had been darting keen glances from a pair of hawk-like eyes at my luggage; "De stores are chock-full, and vot ish more, de storekeepers are a set of robbers. You put your goots in their varehouse, you pay five shillings a veek for de accommodation, you come back in a month's time, and you find your box broke open, every ting gone dat ish vorth stealing. I give you my vord, they are daylight robbers, these storekeepers."

"What's to be done?" I whispered to Prawle, dolefully.

"I should sell the big box, and all that's in it, if I were you," answered my comrade.

"You vould sell it?" said Hawk-eye, "but who vould puy it? Who vould puy this?" he continued, laying his great yellow claw of a hand on an elegant sprigged waistcoat, which my dear mother had packed up as part of my Sunday attire. "Dese articles are not vorn in Melbourne."

"I think I had better send the box back to England," I observed, in despair.

"No, no, my tear yong gentleman. That vill never do. You must make your monish of it."

"But according to you, nobody will buy it of me."

"Not many vould puy it. But there ish von man in Melbourne that puys such goots for the German market. He ish a ferry goot man is Mr. Wolf. Vy, dere he ish!" exclaimed Hawk-eye, in accents of the most utter astonishment.

"Wolf! Wolf! Who'd ever tink of seeing you here?"

"Good morning, Mr. Marks," said a quiet-looking elderly man with a dirty face. "Vot ish it?"

Hereupon Mr. Marks explained that I wished to sell a box and its contents. Mr. Wolf seemed very unwilling to buy, declaring that his stores were full from garret to cellar, but, ultimately, at Mr. Marks's earnest entreaty, and, as a token of the high respect and tender affection which he entertained for that gentleman, he agreed to give me five-and-thirty shillings for my box and all the articles contained therein. The said articles had been selected and packed, with the utmost care, by my dear mother, and had cost at least six pounds of my father's hard-earned money. Captain Staunton kindly undertook to forward the remainder of my luggage to the consignee's office, as he was sending certain surplus stores ashore. Then, the captain's gig was lowered, the three apprentices and myself manned the oars—for none of the crew could be trusted ashore—Mr. Hennessy took the tiller-ropes in his hand, and we waved our farewells to the *Ruth Hayward*.

When I said that we could trust none of the crew ashore, I did not speak quite literally, for we had one of the sailors in the stern-sheets of the boat, a poor fellow who had been for weeks ill with the scurvy, who had been gradually growing worse, and who was now being taken, by the captain's orders, to the Melbourne Hospital. He was a pitiable object. His face was blotched with the horrible disease, and his legs were all black and swollen. He had not contracted the complaint on board the *Ruth Hayward*, for our provisions were of excellent quality, and our lime-juice was served out with the regularity of a man-of-war; but during a previous voyage, on board a whaler, where he had lived on salt provisions for twelve months at a stretch. And here I will mention the other piece of business which Mr. Hennessy had undertaken to execute for the captain.

Just before our vessel left Liverpool, a wealthy and highly-respected merchant, named Donnithorne, visited Captain Staunton, and told him that his brother, who was going out as a second-class passenger, was so addicted to drink that it was not safe to trust him with any large sum of money on board ship. He therefore handed the captain a bill for fifty pounds, requesting him to defray any necessary expenses which

might be incurred, and hand his brother the balance on arrival in Melbourne. Mr. Edgar Donnithorne, the passenger, appeared to be an agreeable gentleman-like man, but he soon showed his evil propensities, got drunk every day, and, in a week or two, had spent all the spare cash which he had in his pocket. He then implored the captain to advance him more liquor on the strength of the £50 bill. Captain Staunton and Mr. Hennessy, having consulted together, agreed that it would be impossible to debar him altogether from drinking. They determined therefore to allow him wine and beer to the extent of ten shillings a week (not an immoderate allowance, for the wine cost half a crown, and the beer a shilling a bottle), and I don't think he ever was the worse for liquor again during the remainder of the voyage. On the first day of our arrival in Hobson's Bay, Donnithorne came to Mr. Hennessy in high spirits, said that he was going ashore, just to see something of Australia, in company with four or five other passengers, and that he would return the same night, as all his luggage was still on board. He asked for money, which Mr. Hennessy felt was a reasonable request, and accordingly, with the captain's sanction, he advanced Donnithorne thirty shillings. Late that night all the passengers who had gone ashore, excepting Donnithorne, returned in a sailing-boat which they had hired. They said that Donnithorne had picked up some acquaintance at a tavern, and had declined to return with them to the ship. Several days passed away, and, as no Donnithorne appeared, Captain Staunton grew anxious, and determined to advertise for him in the *Argus* newspaper. Mr. Hennessy undertook to order the insertion of the advertisement while on shore, and this was the second piece of business which he had to execute.

I shall not say much about my first impressions of the colony. We landed at Liardet's Beach, where, at that time, there was only an hotel, and a wooden building or two. It is now a bustling suburb, connected with Melbourne by a railway, and re-christened Sandridge, an appropriate name, seeing that it is built on a *ridge* of *sand*. We engaged a seat for our sick man in a sort of omnibus which plied between the town and the beach for the moderate sum of half a crown—the distance was only three miles—and then proceeded on foot, sinking in many places over our ankles in sand, till we crossed the Prince's Bridge, and entered the famous city of Melbourne. Our eyes were at once struck by several peculiarities. Among the crowds which thronged the streets there were five-and-twenty men to one woman; the men were mostly dressed in bright-coloured flannel shirts, and wore hats made of felt, straw, and cabbage tree; the houses were built very irregularly, a handsome three-story edifice being situated often between two

miserable wooden huts; lastly, every third or fourth shop was covered with placards, offering to buy gold at the highest possible price.

On our arrival at the hospital we delivered over the sick sailor to the care of the house-surgeon, who received him with much kindness and consideration. The surgeon then said, addressing himself to Mr. Hennessy :—

"I wish you would come with me into the accident-ward. I want to show you a case there. The patient appears to be a new comer in the colony; we can ascertain nothing about him, and as you have been purser on board a large passenger-ship, perhaps you can help us."

Prawle's great eyes glistened at the word "accident-ward." He was the kindest creature in the world, as I shall hereafter have occasion to show, but he had a keen appetite for horrors. So he said, "May we come too, sir?" "Certainly," replied the surgeon, "if you will tread softly, and talk gently."

The accident-ward was not nearly such a dreadful-looking place as I had imagined, and I could tell by the expression of Prawle's face that he was quite disappointed. Everything was clean, quiet, and airy. Little was to be seen of the patients, except their heads, though some, who were recovering, sat up, propped by pillows, reading books. There was one exception, however—the man whom the house-surgeon had invited us to see. His skull was fractured, and his face was completely laid open by a terrible transverse cut, extending from the forehead across the nose to the lower jaw. He was lying in a state of insensibility, breathing heavily; a most pitiable object to behold. We all gazed at him with horror-stricken eyes, and we all murmured at the same moment—

"Donnithorne!"

Yes, it was Donnithorne. He had been picked up in this dismal condition in one of the swamps which, at that time, existed between Williamstown and Melbourne. He could give no account of himself, but it was supposed that he had got drunk, and had then been followed by some of the miscreants with whom the colony was swarming, and assaulted in this dreadful manner. Mr. Hennessy left the balance of his money with the hospital authorities, never expecting again to see him alive. I was afterwards surprised to hear that he had completely recovered, that he had gone up the country as a shepherd, and had become a strict teetotaller. Perhaps that cracked skull preached a practical sermon on the dangers of drink which he was unable to resist.

On board ship Mr. Hennessy had been rather strict and stern, seldom talking of anything except our official duties, which had indeed occupied

nearly all our time. Perhaps he was afraid that if he became too free and easy I should take liberties with him, and neglect my work. Now that he was on shore, and that his duties as purser had ended, he became quite a different creature, and, though still rather sober and decorous, he made himself very pleasant. He invited Prawle and myself to dine with him at the Shakespeare Hotel in Market Square, and as we came in sight of the house, a humble one-storied building, he told us its history: —

"This," he said, "is, I believe, the first house what was built in the colony. For some time after the pioneer settlers arrived here from Van Diemen's Land, in 1835, they lived in tents which lay scattered about among the gum-trees. This house was the tavern, the town-hall, the court of justice, and the church of the infant settlement, and here Mr. John Fawkner, who is now a great man, and a member of the Legislative Council, used to read prayers on a Sunday."

Mr. Hennessy went on to tell us that on his first visit to Melbourne the stumps of the original forest-trees were still standing in the middle of the Collins Street roadway. At the time of our visit Collins Street was nearly as bustling a thoroughfare as Oxford Street, London.

On entering the tavern we saw a practical example of the foolish and extravagant way in which the lucky diggers got rid of their earnings. The pewter top of the bar was completely covered with champagne bottles, and a respectable-looking young man, dressed in the usual miner's costume, was standing there inviting everybody to drink a glass of champagne with him. He was apparently quite sober, and as he politely stated that he should feel hurt if we declined to partake, we each drank his health. Each bottle of champagne cost the giver of the feast twelve shillings. I have since seen the same sort of thing done over and over again, but this instance impressed me the more, because it happened directly after I landed, and also because of the decent behaviour of Mr. Gregory. I ought to have said that he solemnly announced his name to each person who entered.

"My name is Gregory, sir, and I shall be obliged by your drinking my health."

Whereupon Mr. Hennessy, bowing with as much gravity as if he had been seated at the Port-Admiral's table, replied, as he raised his glass, "Mr. Gregory, your very good health," and then passed into the dining-room.

After dinner was over we all gave loose to our tongues.

"You don't mean to say that you won't go up to the diggings, Mr. Hennessy?" said Prawle.

"Certainly not at present," he replied. "I must stay a few days in

Melbourne, but as soon as possible I shall go down to Portland, where my brother's farm is situated. The busy time of year is now coming on, and they will need all the help they can get. In the long run, Mr. Prawle," he said, with a smile, "we farmers will get hold of the gold which you dig for; you can't eat gold, so you will be obliged to exchange it for my brother's corn, and cheese, and butter."

"Don't be disheartened, Stephen," said Prawle, "by what Mr. Hennessy says. Everybody does not want corn and cheese, but everybody wants gold. If we can only dig enough of the yellow metal, we shall want for nothing which gold can buy."

"I say, Prawle," I asked, presently, "where have you slept since you came ashore?"

"Well," he replied, "in a variety of places. One night, on the parlour-table of a tavern, where I should have been very comfortable if another gentleman had not persisted in putting his feet in my face; another night, under a boat on the beach. The next evening, being flush of money, I found my way to Clutterbuck's Genteel Boarding-house, a sort of Australian imitation of McGaffney's. I shall stay there to-night, and you had better come there too. To-morrow I intend to enter on a new line of life. We are all going to live in a tent."

"A tent!" said I. "How jolly that will be. Can I come too?"

"Of course you can. I told them you were coming."

"Shall you consider it an impertinent question, Mr. Prawle," said Mr. Hennessy, "if I venture to ask you how you came to be flush of money? I know the *Ruth Hayward* didn't pay you very liberally for your services."

"I will tell you with all possible pleasure," replied Prawle. "Being of a haughty and, at the same time, of a sanguine disposition, I refused to borrow more than a sovereign of my friend Stephen here, when I went ashore, although fully aware that he was rolling in riches. The steamboat fare and a little refreshment swallowed up a quarter of my resources. The remainder I parted with in the following manner:— While I was seated in a tavern, enjoying a crust of bread-and-cheese and a glass of English ale, for which the landlord had luckily demanded cash on delivery, a respectably-dressed elderly man came in, and looked very hard at me several times without speaking. I told him, rather impudently, that I hoped he would know me again. He replied, 'I thought I did know you, sir, but I suppose I am mistaken. I fancied you bore a resemblance to my old friend Captain Peter Prawle, of the *Bouncing Betsy*.' 'I am his son, sir!' I exclaimed, with astonishment. We then had a great deal of talk together. He told me that he

was a squatter on the river Murray, that he should be going past the Bendigo diggings in a few days, and that, if we pleased to accompany him, he would lend me and my friend (meaning you, Stephen) horses to ride upon. He asked me if my father had supplied me with plenty of money. I replied that I had only fifteen shillings in the world, and that that was borrowed money. He expressed his astonishment at my poverty, and said, 'Come, Prawle, for your father's sake I will make you a present of a twenty-pound note.' I was quite overpowered, and hesitated to take it, although he forced it into my hand. 'Well,' said he, 'if you are too proud to accept my gift, let us make an exchange. Give me your fifteen shillings—I want to settle a small account at the bar.' I could not refuse such delicate generosity. He presently went out, saying that he would return in five minutes. He did not come back: I began to grow suspicious, and showed the note to the landlord. 'Is that a good note?' I asked. 'It *was* a good note,' he replied, 'but the bank failed five years ago.' I was in a tremendous 'wax,' especially when I found that my squatter friend was well known under the name of Soft Sawder Simon, and that he practised these tricks on every new chum he could get hold of. I had no money to pay for supper or a bed, but the landlord very civilly let me sleep on the parlour-table. Next day, I met some of our passengers, who treated me to a dinner. That night I slept under the boat, as I told you. The day after, I wandered down to the wharf, looking for a job. A gentleman landed from a boat with a large portmanteau. 'Will you carry this?' he said, addressing a great, hulking, dirty-looking fellow, who was lounging against a post. 'Carry it!' cried the man, in a tone of disgust; 'I'll buy you up, and your trunk too, if you like,'—and he pulled out a roll of notes. 'I'll carry it, sir, if you please,' said I, touching my cap. 'That's a good lad. To the Prince of Wales' Hotel, please.' The gentleman gave me half a crown; and, as I got a dozen jobs or more of the same kind during the afternoon, I found myself worth twelve shillings at sunset."

So much for Prawle's first adventures ashore. In the evening he took myself and Mr. Hennessy to Mrs. Clutterbuck's Genteel Boarding-house. I could not see much gentility about it, for we slept half a dozen in a room, cleaned our own boots, and washed in a basin set out in the yard upon an old packing-case. Mrs. Clutterbuck was a bustling, sharp-tempered lady. Mr. Clutterbuck was a tall, thin, doleful man, who had been a schoolmaster in England, and who appeared to spend his days in the yard, splitting obstinate logs of firewood with a very blunt axe. Most of the inmates of the house were new comers like ourselves, but there was one man present at supper whom everybody

seemed to regard with some curiosity. He was a strange-looking old man, with bright eyes and a long grey beard. Prawle afterwards told me that he was a medical man, that he was very proud of having been one of the first Victorian colonists, and that he was rather touched in the head.

I did not much fancy sleeping in a room with a number of strangers, but Mrs. Clutterbuck declared that she was unable to accommodate us otherwise. Nor was I much comforted when I saw the old colonist, who was reported to be mad, come stalking in. He undressed, however, quietly enough, and went to bed without saying a word to anyone. But soon after, when the candles were put out and everything was quiet, this strange gentleman began to talk to himself in a loud voice, expressing his opinions concerning his neighbours with the utmost bluntness and sincerity. "What have all these donkeys," he exclaimed, "come to the country for? Do they expect to make their fortunes? They won't. The fool I sat next at tea-time means to make £10,000 in a twelvemonth. Ha! ha! ha! ha!" He went on in this fashion for half an hour, till somebody, who, I suppose, had heard his rhapsodies before, and had grown weary of them, cried out, "I say, doctor, hold your jaw, if you don't want a boot shied at your head." Hereupon the doctor relapsed into silence, and I went to sleep. But I afterwards awoke in a dreadful fright. The moonbeams were streaming in at the window, and in the moonbeams stood a white figure with a long beard. At first I took it for a ghost, when suddenly it began to speak, and I recognized the doctor's voice. "My dearest Louisa!" he exclaimed, stretching out his hands; "I shall come very soon, and join you. Don't look so reproachfully at me. You are my own dearest wife." Just as he said these words, a black object came whizzing through the air, and hit the doctor a smart blow on the back. "I told you I'd do it, doctor, and I have," said the same voice which had spoken before. "Why don't you stay in bed, you old fool?" I fully expected that the doctor would fly at his assailant, and that a desperate struggle would take place between them; but, instead of that, he crept back to bed quite quietly, merely saying, "You've bruised my back, sir, severely." "I meant to bruise it," retorted the other, savagely. "D'ye think I'm going to pay Mother Clutterbuck half a crown a night for a bed, and get no sleep? You ought to be in the Yarra Bend Lunatic Asylum, that's where you ought to be." I did not sleep very comfortably after this altercation, and was very glad when it was time to get up.

Next day Prawle and I parted from Mr. Hennessy, and made preparations for beginning our adventurous life in earnest. We went to a

ready-made store, and there bought blue serge shirts, corduroy trousers, cabbage-tree hats, and long boots. I contemplated my appearance with huge satisfaction in the storekeeper's looking-glass, and felt immediately like an experienced old miner. We also bought a frying-pan, two tin plates, two pannikins, two knives and forks, and two pair of blue blankets. I then chose out of my boxes a few coloured cotton shirts, some socks and handkerchiefs, as well as a few tools, a gimlet, a tomahawk, a small saw, a pocket compass, and various other necessary articles. Having taken everything out of my boxes that I was likely to want, I packed up the remainder, and, with Prawle's assistance, carried them to the warehouse of Messrs. Pickford & Co., and deposited them there. I had not forgotten the warnings of the German Jew on board the *Ruth Hayward*, but I felt that a firm bearing the honourable name of Pickford must be respectable. "Are you connected with Pickford, the great London carriers?" said Prawle to the warehouseman. "Yes," he answered, "it's the same concern." Thereupon, being fully satisfied, I paid a month's storage rent in advance, rolled up my kit as neatly as I could, fastened it on my shoulders, and trudged away towards North Melbourne.

In those days there was very little cultivated land near the town. You went along Elizabeth Street, for example, a bustling thoroughfare, full of shops, but when you got to the end of the street you found yourself in the aboriginal bush, except that there were not many trees left, most of them having been cut down for firewood. This was the grand route to the diggings; but as there was no macadamized road and no fences, the track made by the bullock-drays and horse-waggons was nearly a mile wide, everybody choosing his own path, in order to avoid the quagmires of mud. On a rising ground, where a few trees were still left standing, and within a mile of the city, I perceived three or four tents pitched. "That's the place we chose for our encampment," said Prawle, "and one of those tents belongs to our mates—they said they would pitch it this morning, but I can't tell which it is till I get close up."

Near the tents there was a small fire burning, and over the fire there stood a young man holding a frying-pan in one hand and a fork in the other.

"Don't you know who that is?" said Prawle.

"No, I don't," I replied.

"That's Wallington, one of the intermediate passengers. Don't you remember him; they used to call him 'Lively Jemmy,' because he was always up to some lark or other? And there's Harvey, his mate, standing at the door of the tent. Coo-o-o-o-ey!"

Mr. Prawle uttered this well-known Australian signal with wonderful emphasis and accuracy, considering that he was a mere infant, colonially speaking, not a week old. To listen to him, you would have thought that he had been bred at the Antipodes.

"Coo-o-o-o-ey!" replied Lively Jemmy, as he shaded his eyes with his hand, and then dexterously turned a mutton-chop in the frying-pan. "Hallo! Prawle, old boy, so it's you, is it? We'd given you up for lost. You're just in time for dinner."

Harvey, who was lounging at the door of the tent, joined in these hospitable remarks.

"Gentlemen," said Mr. Prawle, with great solemnity, "allow me to introduce to you a friend of mine, formerly holding a high official position on board the *Ruth Hayward*, as Deputy-Assistant-Storekeeper-General. He has now abdicated those lofty functions, and desires to be admitted to our honourable fraternity as plain Stephen Scudamore."

"Bravo! bravo!" exclaimed Messrs. Harvey and Wallington. "Are you coming up to Bendigo with us?" asked the latter.

"If you'll allow me," I answered.

"Most decidedly. A friend of Prawle is a friend of all, eh, Harvey?"

"Fine him! fine him!" cried Harvey. "Jemmy has perpetrated a piece of poetry."

"Now then, gentlemen," said Jemmy, "dinner is served. The mahogany groans beneath the culinary delicacies piled upon it. In other words, I've turned this bucket upside down, and set the frying-pan on top of it."

"Take your seats," added Harvey. "Here's a packing-case for you and Scudamore, Prawle. I'm going to sit on this bundle of blankets. Jemmy won't want a seat; he's going to wait at table."

"Is he?" replied Jemmy. "I guess you're mistaken. Jemmy has done the cooking, and that's enough for him. In this free and enlightened country every man waits upon himself. I'm glad to see you've brought plates and pannikins, Scudamore, as we have none to spare. Here's the tea, for anybody who wants it, strong and hot; and I've treated the company to milk to-day, as we shan't get any on the diggings."

I enjoyed this dinner uncommonly. It was like a rough sort of picnic, and reminded me of the days when Lucy and I feasted on bread-and-cheese and apples in Halket Wood. I suppose my appetite must have been particularly keen, for, though Jemmy Wallington was but an indifferent cook, the mutton-chops tasted most delicious. Then there was a charming sort of confusion about our mode of living. The place

where the tent was pitched was wild and uncultivated, and put me in mind, with the other tents that were dotted about, of an encampment of gipsies; yet we were close to a large bustling town, we could see the church-spires and the warehouses, the stream of traffic to and from the gold diggings passed within half a mile of us, and the butcher from whom Jemmy had bought the mutton-chops had offered to call every morning for orders.

After dinner, while Prawle was engaged in washing the plates, Harvey proceeded to deliver an oration, as Jemmy Wallington called it.

"Gentlemen," he said, "I wish to make a few remarks, principally for the benefit of our new mate, Mr. Scudamore. Until this morning it was arranged that we were to start for the diggings on foot, carrying our traps on our backs, under the leadership of Captain Spanswick. This morning I had an interview with the captain. He informed me that he purposes to-morrow morning to submit to our notice a complete change of plan."

"What is the new plan?" asked Prawle.

"He declined to make it known till to-morrow morning."

"I hope he won't keep us hanging on here much longer," observed Prawle. "I want to get to the diggings."

"A little delay won't hurt us," observed Harvey. "The roads have been in an awful state all the winter. Every fine day gives us a better chance of travelling comfortably."

"Who is Captain Spanswick?" I asked.

"A friend of Harvey's," answered Jemmy Wallington. "Tom will tell you all about him. Quite an aristocrat, isn't he, Tom?"

"He's a very nice fellow," observed Harvey. "Full of pluck and vigour. He's just the man to organize a good working-party."

"Why doesn't he live out here in the tent?" I asked.

"Bless you!" cried Jemmy, "the captain is too great a swell for such a humble edifice as this."

"Nonsense, that isn't the reason," said Harvey. "He'll rough it with anybody, if necessary; but business compels him to stay down in town. He knows a lot of squatters, members of Assembly, and so on; that's why he goes to the Prince of Wales' Hotel."

"Prince of Wales!" said Prawle. "Is he a smartly-dressed little man, with a red beard?"

"That sounds like him," answered Harvey.

"Then it was he who gave me half a crown for carrying his portmanteau. He seemed a jolly fellow."

"He is so, and no mistake," said Harvey.

Just before sunset, Wallington called out, "Who's coming to help me fetch wood and water?"

I was longing to be of some use, so at once said with alacrity, "I will go with you."

"Come along, then. Catch hold of this bucket, and I'll take the other. And, I say, I see you've got a saw and a tomahawk. They're both useful tools. Bring them with you."

We went for nearly half a mile across a very desolate region. It was entirely uncultivated, and had formerly been thickly timbered, but now the axe had felled nearly all the trees, and there were only a scattered few here and there remaining. At length we reached a hollow place between two hills, where there was a pool of very well-tasted, though rather muddy, water. We filled our buckets, and then looked about for firewood.

"I don't see a stick of timber lying about," said Jemmy. "We must either hack away with the saw and tomahawk at these old stumps, or else we must cut down one of those little trees yonder. Now, cutting down trees is risky work here. It's strictly prohibited within the city limits. If the police saw us, they would clap us in chokey. I don't blame them for trying to preserve any shady or ornamental trees. But of what use is that scraggy brute yonder, except for firewood? He has only one branch on his thin, twisty body, and his head is about as big as a hearth-broom."

"Let us cut him down," said I, drawing my tomahawk from my belt.

The tree in question was about twenty feet high, and as thick at the butt as a man's thigh. Our tools were small, and it was almost dusk by the time we had hacked it down, and cut off a good bundle of firewood from the upper end.

"Come along, Scudamore," said my companion, as he staggered away under the weight of his two buckets of water; "pick up your faggots, and look sharp, or it will be dark before we get back to the tent."

With these words he took his departure, and had proceeded a hundred yards before I had properly arranged my pack of firewood for carrying. I was just in the act of placing it on my shoulders, when something touched me from behind. I turned round with a great start, and was extremely surprised to find a woman standing before me. She seemed to have risen up out of the earth, for no human being had been previously visible. She was about thirty years of age, rather shabbily dressed compared to most of the Melbourne ladies, whose clothing was smart and new, and her face bore a very sorrowful expression.

"Can you tell me—" she began, in a soft voice.

"Are you coming?" shouted Jemmy Wallington, without turning his head round, "I shan't wait any longer."

"All right," I answered, and then turned to listen to the woman.

"Can you tell me," she asked, as she looked round with rather a bewildered air, "what has become of my tree?"

I started guiltily at these words. Who could this woman be? I had heard in London of the Ranger of the Parks; perhaps this lady, in spite of her shabby dress, was the Ranger of the Victorian Woods and Forests.

"Your tree, ma'am?" I said, doubtfully.

"Yes, a tall thin tree, with one branch sticking out from it."

"We have cut it down."

The woman uttered a loud cry. "Oh! you cruel creatures," she said. "How could you do so? And yet how could I expect you to know any better? The last link is broken—the last link is broken. Perhaps it is better so. I shall never come here again." And without saying another word, she rushed away into the darkness, leaving me all alone. I essayed to "cooey" for Wallington—mine was but a feeble imitation of Prawle's vigorous utterance—but I received no reply—so was compelled to try and find my way back to the tent by myself. But this was not an easy matter. As is generally the case when one is with a person who knows the way, I had paid no attention to any landmarks, and I was quite at a loss to know in which direction the tent lay. I wished that crazy woman had been at the top of Mount Macedon before I saw her, for it was through staying to listen to her wild utterances that I had missed my companion. Now, there would have been some honour and glory in losing one's way, and then recovering it in the wild trackless bush of the interior of the colony, but here it seemed absurd to talk of being lost. The twinkling lights of the city of Melbourne were right before me, and half-an-hour's brisk walking would take me among the streets and shops. That, however, would not help me to find our tent, so I determined to avoid entering the city, and wandered about the outskirts for two hours or more, till I felt quite exhausted with the weight of the load of firewood which I was carrying. I should have been delighted to throw it down, and escape from the burden of bearing it, but I felt that I was bound in honour to carry it until I discovered my mates. At last I saw a tent gleaming in the distance by the light of a small fire, round which three or four figures were standing. I ran hastily forward, shouting, "Prawle! Harvey! Wallington!" In reply to my summons, a great dog rushed out at me, barking with such excessive rage and fury, that he nearly choked himself. He would have

seized me, but I held out my hat to him, and while he was snapping at that, I gave him a vigorous kick, which sent him yelping away.

"What d'ye mean by kicking my dog, yer young thief?" exclaimed a loud, bullying voice; "I'll shoot yer, if yer don't keep off."

A moment later I saw the flash and heard the report of a gunshot. I don't suppose the man meant to do more than frighten me, but, at the time, I could have declared that I heard a bullet whistle close by my head. I stooped down to avoid a second shot, and then ran away as fast as the darkness and the tired state of my legs would allow me.

Some time afterwards I drew near another group of tents. Being rendered wise by experience, I resolved to approach them with great caution. As I did so, I heard voices raised in loud altercation, intermingled with the growling of a dog. At first I thought I had got to the tent where I had been treated so inhospitably, but I presently perceived that it was not the same place.

"What d'ye mean by tumbling over my tent-ropes for?" said a deep voice.

"I couldn't help it," was the reply. "Why did you set your dog at me?"

"To larn you better manners than to go disturbing a man arter he'd turned in."

"Your brute of a dog has bit my leg."

"So much the better. I'd punch yer head for two pins."

"Would you?" And a tall gawky figure, which looked uncommonly like a figure that I knew, assumed a fighting attitude, and squared up to its antagonist.

"Come on, Harvey and Wallington, and see fair play," it said. "We're going to fight it out."

At these words I rushed forward, shouting, "Prawle, Prawle! Hurrah! I've found you at last!" A minute later I had reached the tent, had thrown down my bundle of wood, and lay on the ground panting with fatigue. My entrance had caused a slight interruption to the battle which was about to take place. The intending combatants were not very unequally matched, for Prawle, though only sixteen, was tall of his age, muscular and active, while his enemy was a short, punchy broad-shouldered fellow, of at least five-and-forty years of age.

"I'm a Greenwich man," observed the punchy gentleman, as he flourished his fists, preparatory to action, "and I ain't afeerd of no one."

"A Greenwich man!" said Prawle; "why, I was born at Greenwich. I was born in the Trafalgar Road."

"You don't mean that!" said his adversary, with an air of astonish-

ment, as he lowered his fists. "D'ye know Poyntz the tea-grocer?"

"Of course I do," said Prawle, readily. "He lives at the corner of Nelson Street. My mother has dealt there for years."

"D'ye know Ivins the oilman?"

"Know Evans!" replied Prawle, unconsciously correcting his enemy's pronunciation. "I know Evans as well as I know my own father. I wish I'd as many sovereigns as I've eaten Yarmouth bloaters out of Evans's shop."

"Ha! ha!" shouted the punchy man, apparently quite tickled with Prawle's recollections. "Then you and me's 'towneys,'* it seems, arter all. Well, well, it warms a man's 'art to find a fellow-countryman in this here dissolute country. Shake hands," he continued, extending a formidable brown paw. "I bear no malice. No more don't Pug," he said, indicating the dog. "Shake hands, Pug, with the young feller from Greenwich. And now, gentlemen," continued the punchy man, turning towards Harvey and Wallington, "allow me to make a hobservation. This young feller and me has had a difference. That difference is now made up. Let us drink success to our future careers, whatever those careers may be. In my tent, which but for Pug, would be quite solitary, my mate, wot come out from Greenwich with me, being prosterated with colonial fever in the 'orsepital—in my tent, gentlemen, there are two bottles of beer, the last of a batch brought aboard ship by me, and brewed on Blackheath Hill. Have the kindness, gentlemen, to enter, and partake."

We all closed with this hospitable offer, and at once entered and partook. Prawle speedily forgot all about the quarrel, and being of a jovial disposition, entertained the Greenwich man by singing a comic song, with which he was delighted, inasmuch as it contained certain allusions to the steamboats belonging to the Watermen's Company. Harvey and Wallington were very merry, and I was growing extremely sleepy, being quite tired out by that long tramp, with a heavy bundle of firewood on my back, when, all of a sudden, we were startled by the sound of a horse's hoofs, coming close to the tent. Pug set up a deep growl, and the Greenwich man pulled open the door of the tent to see what was the matter.

Close by the remains of our fire, which still emitted sufficient light to render surrounding objects visible, there stood a tall, handsome horse, upon whose back was seated a tall, handsome, picturesquely-dressed man. He wore a bright scarlet over-shirt, white cord breeches, thigh-boots, a

* *i.e.*, fellow-townsmen.

black slouched hat, and carried a brace of revolvers in his belt. In his right hand he held a black clay pipe, and, with a somewhat peremptory voice, he bade one of us hand up a firebrand to light his pipe with. Prawle immediately obeyed the request, and we all stood regarding the stranger with eyes of uneasiness and awe, for, as we afterwards confessed to one another, we had made up our minds that he was the captain of a band of bushrangers. The supposition was not so very unnatural, for the country swarmed with these gentry at that time, and they were fond of arraying themselves in this gay picturesque style.

The stranger took two or three deliberate puffs at his pipe, until he had got it well alight, and then said, "Who's the oldest chum in all this party?"

For a few moments we were silent; then Jemmy Wallington said, "We four belong to one ship, the *Ruth Hayward*. We've been five days in the country."

"I've been here three weeks," said the Greenwich man, with an air of conscious superiority.

"H'm," observed the stranger, "all tolerably green apparently. Now then, my lads, I'm tired, and thirsty, and lonely. I've ridden five-and-twenty miles without speaking to a soul. Can you ride, youngster?" he said suddenly, tapping my shoulder with his whip.

"Yes, sir."

"Then," said he, slowly dismounting with the air of a man who was thoroughly weary, "take my horse, and this one-pound note, ride him to the nearest tavern—it isn't a mile distant—and bring back all the grog you can get for the money. I'll help you to drink it."

My companions immediately assisted me to mount the horse, not that we wanted the spirits, for we would sooner have been a-bed and asleep, but because we were mortally afraid of this redoubtable stranger, who carried pistols in his belt.

In a short time I returned laden with bottles, and then the stranger came into our tent, and for two hours or more told all sorts of amusing anecdotes. Indeed, he made himself so agreeable that none of us felt any desire to go to bed. We gradually lost our awe of him, and at last Jemmy Wallington ventured to hint that we had taken him for a bush-ranger. The stranger laughed, and told us that we were not so far wrong. "For," said he, "although I am not a thief, I am a thief's advocate. I have had the honour of defending the majority of the scoundrels who have been hanged or sent to the hulks in this colony during the last ten years. In other words, I am, what is called in England, an Old Bailey barrister."

We afterwards found that this was quite true, and that he was a very clever lawyer, but eccentric, and fond of all kinds of strange frolics.

In the course of the evening I told the story of the melancholy shabbily-dressed woman, who had addressed me by the waterhole. The lawyer listened with great attention; and then said: "I can tell you who she is, and why she spoke to you. Her husband held an office of trust in this city. He fell into extravagant habits, committed some frauds, and when he was detected went and hanged himself on a tree not far from where we now sit. His wife was the first person who found him there, she became partially deranged, and has, I have heard, been ever since in the habit of haunting the spot."

Soon after the stranger rose, wished us all good night, hoped we might dig plenty of gold, then mounted his horse, which had been "hobbled" outside, and rode leisurely into town.

(To be continued.)

The True and Wonderful History of the Dog Dandy.

BY HIS OWN MASTER.

CANTO THE SECOND.

DANDY'S MARRIED LIFE IN BENGAL.

XXVII.

FULL six months more of Oude campaign,
Marching here, there, and back again,
Fail'd to lay "Dandy" with the slain.

XXVIII.

Tho' oft the bullets o'er him flew,
Their aim proved happily untrue,
Or he'd have ne'er been known to you.

XXIX.

Flora pass'd likewise free from harm
Thro' every danger and alarm,
Increasing daily in each charm.

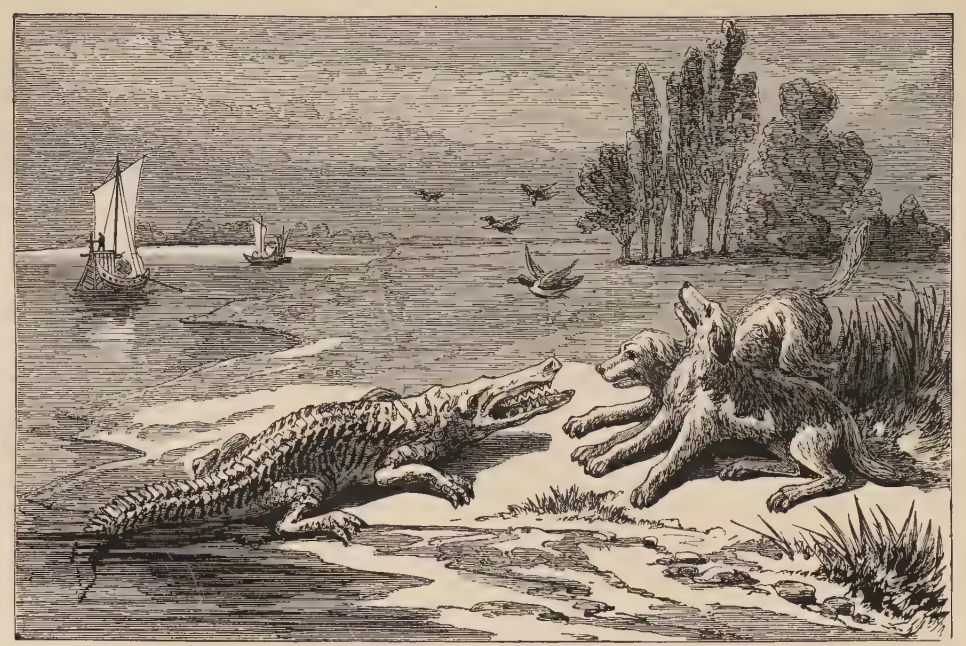
XXX.

At length, when war's rude deeds were done,
Laden with laurels fairly won,
Dandy and Flora long'd for fun.

XXXI.

Removed to Ishapore's green glades,*
They roam'd at large 'mid rural shades,
The pets of matrons, men, and maids.

* A beautiful official residence near Calcutta, where Dandy's master filled an important appointment under Government.



DANDY IN BENGAL.

XXXII.

Or, romping ever side by side,
They plunged in Hooghly's rapid tide,
And greedy crocodiles defied.

XXXIII.

But chiefly 'twas their joint delight
To chase a duck, till mad with fright,
It quack'd, then dived quite out of sight.

XXXIV.

Perplex'd, they wildly gazed about
Till ducky's head afar popp'd out,
Then recommenced the race and rout.

XXXV.

Like two attendant satellites,
They shared with us each day's delights,
And guarded our repose by nights.

XXXVI.

Oh! happiest days of doggish life!
To me with pleasant memories rife,
Remote from worldly care and strife.

XXXVII.

Five tranquil years thus slid along,
Like the sweet cadence of a song,
Then lo! once more the world's loud throng!

XXXVIII.

Farewell! calm shades of Ishapore,
Which we have rambled o'er and o'er!
We ne'er, alas! may see you more.

XXXIX.

Yet do you ever present seem—
Our never-tiring fireside theme;
Most real once, tho' now a dream!

XL.

Link'd with those scenes what visions rise
Of friends whose love we used to prize;
Some gone before us to the skies.

XLI.

Alas for Flora !—Dandy's mate—
We mourn her cruel tragic fate,
Cut off by bullet in her pate.

XLII.

I draw a curtain o'er the reason
Assign'd for that dark act of treason,—
Which happen'd in the "Dog-day" season.

XLIII.

To India, too, a fond farewell !
Where long it was my lot to dwell,
As best the "army list" can tell.

XLIV.

I owe thee much, tho' doom'd to grub
In gloom, full fifteen years a "sub";
Like grim Diogenes in tub;

XLV.

Tho' oft thy heat half drove me mad,
And I felt weary, sick, and sad,
Still, 'twere unjust to call thee bad.

XLVI.

Thou first didst offer a career,
And goal towards which my youth might steer,
Without which life had been more drear.

XLVII.

In thee, too, I found all that tends
To man's chief happiness, and ends
With that best good which Heaven sends.

XLVIII.

Therefore, to thee my thanks are due—
India ! tho' faded now from view;
Long mayst thou find good men and true !

(*To be continued.*)

With a Colour-Box.

By the Author of "Our Living Painters."

MY dear Frank,—And so you have got round the corner at last! It *is* a long lane that has no turning; and learning to draw is, you see, no exception to the rule. That last bit of pencil-work was really very creditable to you. You have got round the corner now; and having mastered something of form, the colour-box you have so long wished for accompanies this letter.

Yes! here it is, my boy; and I can fancy the pleasure with which you will open it, and gloat over the new treasures. Here they are, all in a row,—not too many of them—for too many would confuse you sadly at first. Don't they look pretty? It is no babyish feeling that suggestive delight the sight of a fresh colour-box excites, either,—or if it be, I, who have opened many such, shall go down to my grave a grey-haired old baby, certain. A painter looks at his box of colours very much in the way a sculptor regards a new block of marble—as a new mystery with a great deal in it. Only I think (because, perhaps, I am more of a painter than a sculptor) that the colours are far *more* suggestive than the marble. I know you will agree with me there; and will think more of your box from Winsor & Newton's than of all the marble in Carrara.

Philosophers say there are only three colours in the world—red, blue, and yellow. But the colourman says there are a great many more; and our present business is with the colourman. Look at them! There are light red, raw sienna, burnt sienna, yellow ochre, and Prussian blue—all iron colours. Then, you have vermilion and sepia, cobalt and Chinese white. And lastly, there are two of the three

primitive colours of the highest class; namely, aureolin and rose-madder. By the time you have learned to use these wisely, not too much, you may, perhaps, have the third, which is called ultramarine, and is very costly.

I am not going to take his business out of your teacher's hands; and am only giving you a few familiar hints as to the use of your colour-box.

Try first to learn something of the grey tints. The understanding of these will do much to educate your eye for colour. You may obtain excellent greys with the paints in your box. For example, you can make a very useful grey by mixing light red and cobalt. This tint will be of use for clouds, distance, and middle-distance. Another very beautiful warm grey is made with cobalt and burnt sienna: this will be found of great use in representing shadows and old buildings. Cobalt and sepia, again, make a good tint for foreground shadows. Cobalt and vermilion are good in combination for a cloud-colour. Cobalt, black, and rose-madder make another good combination for cloud-painting. There is another excellent grey produced with cobalt, yellow ochre, and rose-madder.

Then for greens, cobalt and ochre come in for distance and middle-distance. Cobalt and raw sienna are not so opaque. Both being iron colours, Prussian blue and raw sienna are good paints for mixing. But you must try these and other combinations (though not too many at first, or you will get bewildered) in their various shades, from their deepest tones to their most delicate and aërial gradations. So you will learn them.

Lead and sulphur are the two most obnoxious agents in painting. Sulphur blackens lead when they are combined. For example, when red-lead and flake-white are used in water-colours, you will find they turn black from the sulphur in the air. When you are taken to picture-galleries, you will frequently see examples of how badly-combined or fugitive colours have been used in such a way that they quite mar the beauty of works by many of the great painters.

It is not at all likely that any water-colour drawings of yours are likely to be of much interest to any but yourself and those who are your friends; but it is as well that you should know something of "the reason why" in such matters. I was turning over some of my own drawings the other day, and I noticed that in one the sky had a dark rusty look, and in another—very bright when it was done—the sunset-clouds had gone nearly of a black-brown. These sketches were quite ruined by my injudicious use of the two paints I have warned you

against—red-lead and flake-white. I knew no better at the time perhaps, or they may have been done without thought. I have guarded you against similar mishap by warning beforehand, and, better still, perhaps, by putting no such pigments into your box. Should you ever come to use cadmium, remember it contains sulphur, and is a colour that is best used unmixed.

Aureolin, the new primitive yellow, is the latest and one of the most important colours that modern science has added to the palette. It is a pure, transparent colour, and is said to be quite permanent. It is ranked with ultramarine by the makers; and is reported to be good as a mixing colour, either with blue for bright green, or with other combinations to form grey. I say "reported" to be all this, as I cannot speak on my own experience of its merits, for I am rather old-fashioned in this regard, and the colours in my well-worn box are mostly simple and sober.

If you use your box diligently, and observe the works of others, you will learn that "power does not consist in strong and gay colours, but is entirely the result of proper combinations and contrasts." I remember an artist speaking to me of a picture by an eminent foreign painter, quite lately, that illustrates this. It contained a figure in red, and the colour was very powerful. But though it *looked* red—bright red, when you came to look into it there was only one spot of really bright red about it, and that was on the man's shoulder. This painter knew how to *focus* his colour, evidently. By that term I mean the working up to pure colour by subtle gradations. This quality can be learned, perhaps, best of all in flower-painting; though the principle is of universal application, and you always find it in nature.

Though fine colour in art is like charity in morals, and covers a multitude of sins, always try to have a good basis of form, and light and shade, to support your colour. Mere tint is apt to get vapoury, ragged, or unmeaning without these. And just because colour has so much more fascination than form, its blandishments must be held in check.

So now, set to work. Be patient, and thoughtful, and observant. Remember that there are two harmonies in colour—that of relation and that of contrast. The harmony of contrast is formed by a colour and its complementary;—that is, for example, taking blue for the colour, the "complementary" would be orange. Of red, green; and so on.

The harmony of relation is that of colours possessing analogy; as yellow, orange, scarlet. Most people, however, when they speak of

harmony of colour, mean the harmony of contrast; having learned vaguely—

"That harmonies can be in things unlike."

You will often notice a red or blue figure introduced in drawings: this is done as a colour focus. In the same way, a bit of green or purple is brought in sometimes as an uniting harmony. These are not tricks; they are legitimate resources of art. And having once learned how hard it is to render, with any degree of efficiency, the complex effects of nature, you may be glad to have such resources within reach. It is well to remember, too, that warm colours predominate in nature. Aim, therefore, at warmth of tone, rather than coldness. It is much easier to cool down warmth, than either to retain or recover it. Gradually, you will come to feel like a workman at home with his tools; and your proficiency will be shown, not by mere manual dexterity, but by their willing obedience to the dictates of thought and feeling when you are endeavouring to express your personal impressions of the subject before you. A "clever" drawing, conventional and full of dexterous hand-work, is really inferior, in the eyes of judges, to one, though feebly handled, which bears the impress of nature, and speaks to the heart, because faithfully studied. In sketching from nature, it is best to begin with near objects, and gradually to extend your range as you feel your way.

In studying nature, look first at all together. Form is at the bottom of everything. Even smoke has a form.

When you have learned what to let go and what to hold fast, you will have acquired the principles of art.

Freshness is the result of fidelity to nature.

Old Jonathan Richardson observes,—"There is bold painting, but there is also impudent painting." When the beginner tries for boldness before he has acquired the necessary knowledge and skill, he is sure to fail. Do not shirk difficulties; try to overcome them. It is far better to err on the side of care, than in the direction of "dash." Indeed, niggling minuteness, at first, is what I would prefer seeing in your bits of studies. You can only acquire power by degrees. And in the amateur painter, taste and feeling are rather what one looks for than technical skill. Even if you do not make much of it, you will learn to "see" nature better than those who have no knowledge of painting; and you will find that, if you cannot produce works which satisfy yourself, you may still make pleasant memoranda of scenes and objects you wish to remember. You will have learned at least *the use of a box of colours.*

Far Away in the Frozen Seas;

OR,

A STORY OF A WHALING EXPEDITION.

CHAPTER VI.

THE SLEDGING PARTY.

CAPTAIN BECKER had given Robert the most explicit directions as to how and where the stores of provisions were to be deposited. Three stations were to be made, as nearly as possible, at equal distances apart. The first was to be about thirty miles from the ship, the second thirty from the first, and the third, of course, thirty from the second.

It was impossible, certainly, to measure the distances with any exactitude, but they hoped, at all events, to get fifty or sixty miles farther north, and if they had the good fortune to discover Captain Griffin on the way, why, then, their onward journeying would be at an end, and they would return to the ship. If not, the Captain had resolved to visit the last station, when the season was favourable, and make it his head-quarters for fresh explorations.

The brave little band pursued their untrodden road with hearts full of courage. The dogs held out stoutly, and proved swift and powerful runners. Since ever Hans had taken them in charge, he had carefully attended to them, and seen that they were properly and regularly fed, for he had often gone out hunting for them, and was so good a shot that he seldom returned empty-handed. He had taken care to bring his trusty gun with him on his present expedition, too, not only for protection against the bears and other wild beasts, but chiefly to have the means of supplying the dogs with food, for it was not possible to

bring any for them in the sledges, as every inch of room was required for the stores.

Robert and the sailors were also provided with weapons and long, strong knives. On the snowy shores of Greenland the polar bears were often seen, and it was necessary to be always prepared for them.

The travellers went on several hours without stopping, till it began to get dark, and the first star shone out in the sky. Then Hans turned his sledge side-ways towards the shore, where he had noticed some over-hanging crags, which promised shelter from the sharp, cutting north wind which was beginning to rise.

The other sledges soon followed, and in a few minutes they found themselves, to their considerable astonishment, in the midst of several small huts, built of stones, piled up one on the top of the other.

"Why, Hans," exclaimed Robert, "what's all this? Have we got by accident into a settlement of your people?"

"No, no!" said Hans, giving a searching look round, "these huts are not inhabited. Look, sir, there are no tracks in the snow, at any of the openings, and only a few gnawed bones of the walrus and moose deer are lying about, and they are quite bleached with exposure to wind and weather. People have lived here once, but it has been many a year ago. However, let us light a lamp and go in."

He went immediately to his sledge, and, taking out a large tin lamp, filled with train-oil, set light to the wick. Lamp in hand, he and Robert entered the huts, and found the two first just as he had said, quite empty, or, at least, nothing in them but a few worthless household utensils. But when he lifted the skin hanging before the third, and let the rays of his lamp fall on the interior, a cry of horror and surprise escaped from both Hans and Robert, and they stood rooted to the spot, gazing at each other with blanched faces.

At length Robert stammered out—

"Good heavens! what is this? Has some dark deed of murder been done here, in this lonely spot?"

"It's not so bad as that, sir," said Hans, after a second inspection. "Let us go further in; those poor creatures can't do us any harm."

Robert had recovered himself now, and followed Hans into the hut. The light revealed a mournful spectacle. Five human beings sat as if in life, round a roughly hewn table, on which a lamp stood, without any oil in it. Their lips were black, and their eyes closed, and deep sunk in the sockets. Eternal frost had so stiffened their bodies, that no change whatever had come over them. At the first glance they all appeared sleeping, as they sat leaning back, with arms relaxed and

hanging down, and feet stretched out. A frozen dog lay curled up at the feet of his frozen master, and a little child, in a reindeer hood, lay stiff and cold in the arms of her stiff and cold mother.

For several minutes Robert and Hans stood in sorrowful silence. At last Robert said in a low voice—

"What a sad fate! How can it have come about?"

Hans pointed to the little holes in the hut for letting out the smoke of the fire. They were quite closed up with snow and ice.

"That has been the cause very likely," he said. "They have not died of hunger; for look, sir, their hunting gear is still hanging on the wall, and in this place I have noticed already coming along, there is no lack of seals, and they supply an Esquimaux with food and light and fire. I should suppose that a heavy snow-storm came on while they were asleep and completely blocked up the air-holes and so they were suffocated and never woke again. Their position proves that they all died together and this is the only way to account for it."

Robert quite agreed with Hans, and proposed that they should bury them. This was soon done; a mound of stones marked their last resting place, and all knelt and repeated a prayer over it.

They did not travel far next day, for the dogs required food, as they had eaten nothing for four-and-twenty hours and needed a good hearty meal. So about noon all the sledges made a halt in a suitable place, where Hans was confident seals were to be found not far off. One of the sledges was soon unloaded, and Robert and Hans, both well-armed, jumped in and flew off in a gallop over the smooth ice.

They went on famously at first, but presently came to a part where the ice got thinner and seemed as if it would hardly bear the weight of the sledge. For the moment they hardly heeded it, for the excitement of the hunt was at its height as Hans shouted "Pusey! pusey! Seals! seals!"

The next minute Robert saw them too, on the edge of a basin—a little round pond—lying in the middle of the ice.

"We'll have them!" cried Hans, rubbing his hands with glee as he spurred on the dogs to a still faster gallop.

All at once, Robert noticed in alarm that they were getting on a fresh sheet of ice which was clearly most unsafe. He pointed it out to Hans, who looked anxious but said—

"It is impossible to go back; and it is not far to the other side of this stretch of ice. Our only chance is to keep straight on and drive over it as fast as possible. We may perhaps manage it, if the dogs hold out well."

Robert made no opposition, for he saw there was no alternative. Hans urged on the poor animals with voice and whip, and with breathless haste they flew over the rocking trembling road as if they knew that life and death hung on their speed. The thin ice bent like leather beneath them, and every now and then little pools of water would appear. The danger was extreme and the suspense almost unbearable. Both Robert and Hans knew they were lost unless they succeeded in getting to a firmer footing, and this entirely depended on the swiftness of the dogs. A stoppage of a few seconds must plunge the sledge into the sea, and then neither skill nor presence of mind could save them. The seals, whose heads could be distinctly seen, looked in wondering curiosity as they came flying along. Only some fifty paces more and they were safe! Both drew a long breath and felt their deliverance sure, when suddenly the very thing happened they could have least expected. The dogs stopped short, terrified by the heaving of the waves beneath the thin ice, and neither shouting nor lashing could make them go a step further. Indeed, in a few minutes it was too late: the left shaft broke through, then the foremost dog, and in a twinkling the whole side of the sledge was under water.

"Save yourself, sir!" screamed Hans to Robert, "and leave the sledge and dogs to me. We are all right yet, only look after your own safety. Crawl along the ice on your stomach."

Robert instinctively obeyed, and threw himself out of the sledge flat on to the ice. Hans gave him a vigorous push which sent him at least ten paces further, and in less than a minute he found himself standing again on firm ice.

Meantime, Hans was making despairing attempts to cut the traces off the dogs and to get the poor animals safe before he thought of himself. He stooped forward and in an instant was swimming in a pool of loose ice and water. For a few seconds all was confusion, and Robert stood in mortal agony, for he feared that Hans and sledge and dogs would all disappear below the surface; but at last the bold swimmer effected his purpose, freed the dogs, and helped them to get upon the ice. The sledge would swim of itself, and could easily be recovered after Hans had secured his own safety. With perfect coolness and self-possession he fastened a cord to the front of it, took it between his teeth and swam to the edge of the ice, intending to swing himself upwards out of the water. But the treacherous ice gave way the moment his outstretched arms touched it. Once more he tried, and again it crumbled beneath him. A third time he repeated his efforts with all the energy of despair, and a third time the ice broke. The pond in which he was

swimming widened each minute, and it was evident the poor fellow's strength was well nigh exhausted. He could scarcely keep his head above water. Robert called out to him to take the sledge and support himself by it. Hans caught his idea at once, seized the sledge and dragged it close to the very margin of the ice. He leaned on it with one knee, and, holding his breath to lessen his weight as much as possible, pushed his chest against the ice, and slowly and cautiously steadied his arms on it. Then with one sudden spring, which sent the sledge flying backwards, he vaulted clear on to the ice. He was safe, and Robert shouted for joy.

Yes, he had escaped with his life! but he lay now fainting on the ice, completely exhausted, and almost frozen with the intense cold of the water. Robert rubbed him briskly, and poured some wine down his throat from a flask which he had in his pocket. Poor Hans gradually recovered consciousness. He gave himself a good stretch, and then a shake, and finally jumped up on his feet.

"I am all right, sir," he said, "and I thank you for your help. Now for our sledge; we must see and get that safe at once."

Fortunately he had still kept hold of the cord, so the sledge was brought up without much difficulty; and Hans soon got it all in order again, and harnessed the dogs. He had quite recovered his spirits, and seemed as if nothing had happened, but said to Robert: "Well, sir, that is done, and now we'll have a look at the seals."

Robert was perfectly amazed, and asked whether his cold bath had not taken away all inclination for such sport.

"No, indeed," replied Hans, laughing; "we Esquimaux are quite accustomed to little accidents like that, and I have no notion of getting all my pain and anguish for nothing. Besides, the hunt will warm my blood again, and, moreover, we must get one or two seals, or our dogs will die of hunger."

Happily the guns were safe, though a little wet. Hans dried and cleaned them thoroughly, put fresh loading, and then turned to have a look at the seals. They were not a hundred paces distant, half out of the water on the ice, attracted by curiosity, and lay watching for the intruders with their bright lustrous eyes.

"They're just lying in the right position," said Hans. "We'll creep close up to them, and then two good shots will settle the business. Only, Mr. Robert, mind you don't fire till you are quite sure of your aim, for they dive below at the very first alarm, and take precious good care not to come up again."

Robert assured him he would do his best, so off they set. Hans

managed cleverly to keep to windward of them, and hid behind the heaps of snow that lay here and there on the ice. In this way they managed to get nearly quite close, without betraying their presence in the least, for the seals still lay perfectly unconcerned.

"Now, sir," whispered Hans, "you aim at that sleek, lazy fellow lying nearest this on the ice, and I'll tickle his neighbour. Are you ready?"

"Ready!"

"Fire, then!"

Both discharged at once, and great was the commotion of the seals. Every head ducked below, and those who had been basking on the land speedily threw themselves into the water. Only two remained motionless, and they each had a ball in the head.

"That was a good shot," said Hans, "straight into the eye. I see already you have a steady hand, and you'll be a first-rate marksman by-and-by. Come now, and we'll get the seals into the sledge, and go back to our party."

The ice was strong enough in that part to allow of the sledge being brought up close to the carcases, and Hans speedily ripped them open, and threw the entrails to the dogs, who devoured them ravenously. Then he cut them up into pieces with a short hatchet he carried in his belt, and the whole was soon deposited in the sledge. It was no light weight; but the dogs were so satiated with their meal, that they trotted swiftly away over the smooth road, and before long safely reached the resting-place. Their arrival was hailed with howls of joy by the starving dogs, as they rushed eagerly to feast on the dainty food they had brought back for them.

As the short day was already declining, it was thought advisable not to proceed further, but camp out where they were for the night. The sledges were drawn round to make a circle, and in the middle of this both men and dogs were to lie. Every man crept into his sleeping-sack, and made himself as warm as he could in the fur, and they all lay down to pass the long night in sleep. There was soon nothing stirring in the camp, and not a sound was to be heard on all the vast plain of ice but the loud breathing of the slumbering travellers, and an occasional snarl from some dog who was being tormented by his neighbour.

Till the rosy dawn began to glimmer in the east their repose continued undisturbed. Just then, however, a snorting, puffing noise might be heard outside the sledges, and endeavours seemed being made to overturn them or drag them out of the way.

This snorting and puffing first woke the dogs, and then the watchful

Hans, who immediately seized his gun, his faithful companion even in sleep. The dogs seemed so uneasy that he was convinced something unusual had happened; and after listening for a few minutes intently, he crept out of his sack to be ready for instant action. His first glance beyond the sledges showed him the cause of the disturbance: a huge Polar bear, with his white shaggy coat, was prowling round the camp, trying to push away the sledges with his broad paws, and get into the middle of the circle.

"It's well for us that I fastened them tight together last night," muttered Hans to himself. "It might have been a bad job if the brute had surprised us in our sleep; but now we're awake he is quite welcome. Just wait, my fine fellow, and I'll give you something that will burn such a hole in your coat you won't know yourself."

There was already light enough to show the outline of the bear distinctly, and Hans watched till he came round to an opening, and then took aim and fired. It was evident the shot had taken effect, for the bear reared up violently, and then began a furious attack on the sledges, almost shaking them to pieces. However, he would have been wiser if he had taken to his heels and scampered off; for the report of the gun woke everybody out of sleep, and they started up, calling out, "What's the matter? what has happened?"

"Quick! quick! get your guns!" replied Hans. "A grizzly bear has come to pay us a visit, and a prètty tough customer he seems."

The deep growl of the bear, which was heard even above the loud howling of the dogs, confirmed his words; and all the six sleepers rose and got their guns ready to confront the furious animal, who did not appear in the least intimidated. A sharp fire commenced, and whenever the bear made himself visible at a gap, he was greeted with a bullet. He stood it out for a time, only giving himself a shake now and then, apparently to knock the balls out of his coat, and making frantic efforts to break through the intrenchment. At last, finding it resisted all his attempts, he trotted off, as if he thought the contest too unequal.

Hans looked out after him, and exclaimed: "Why it's a she-bear, I declare; there is a young one with her. That explains her fierceness and obstinacy. She scented out the seals, and wanted some of the flesh for her cub. But smoked bear's flesh isn't bad either, so come, let's be after her!"

In a twinkling he had jumped over a sledge, and Robert had followed his example. Away they went in full chase after the bear, who did her best to escape them, but was impeded by her young one. At last, finding further flight impossible, she turned round and faced her foes;

opening her blood-red jaws, and displaying two frightful rows of glistening fangs.

By this time it was broad daylight; and Hans and Robert saw plainly that they had to deal with an unusually large and powerful bear, and that the danger which not only threatened herself, but her young, had made her doubly furious. However, nothing daunted by her terrible aspect, they both fired on her at once. She gave a convulsive quiver, and beat the air wildly for a minute with her front paws; growling, half in fury, half in pain. Then she seemed about to rush forward on her antagonists, and take her revenge; but the loud barking of some of the dogs who came dashing down towards her at full speed, made her change her mind. She seized her young one with her teeth, flung it before her a good distance, and trotted after it. But the dogs soon overtook her, barked round furiously, and brought her to bay. At first she seemed hardly to heed them; all her concern was the safety of her young one. Again she took it up in her teeth, and threw it forwards; and then turned to attack the dogs, to prevent them from pursuing it, and give it time to get away. But the stupid thing always stopped just where its mother left it, and waited quietly till she came up and pushed it on a bit further. Sometimes she managed to get clear of the dogs, and then she would go up to her little one, and run a few steps forward as if to entice it to follow; till the dogs overtook her again, and she had to stop and drive them back. The moment she had beaten them off, she would return to her cub, and either push it before her with her head, or carry it in her mouth.

All this work between the dogs and the bear went on so quickly, that Robert and Hans, who had been loading their guns, could hardly keep up with them. But after a while, the dogs drove her into a narrow rocky valley, where the ground was so rough and uneven that it was impossible to get over it quickly. She slackened speed; her steps grew slower and slower; and at last she stopped short, for her little one was too tired, it could not move another inch. Her old enemies soon surrounded her, and Robert and Hans hastened to the scene of action.

It was a desperate struggle they witnessed. The old bear fought her way backwards, step by step, never losing sight of her young one. If the dogs approached it too closely, she planted herself bolt upright, took the cub between her hind legs, struck at the dogs with her fore-paws, and roared so loud that she could be heard for half a league round. In her fury she would make a snap at the nearest dog, and strike in a circle with her paws; till they seemed flapping round in the air like the sails of a windmill, Her rage increased if she missed her mark, for she did

not dare to fall on any one dog, lest the rest should attack her cub. So she went slowly backwards, dealing blows with her fore-paws; always defying her foes, and glaring fiercely on them, with wide open jaws.

By the time Hans and Robert reached the spot, after a good long run, the little bear seemed to have recovered her strength; for she managed to keep up with her mother at her quickest pace. But the dogs still stuck to her like gad-flies, and kept barking and leaping up round her. Hans tried to call them off, but could not make them hear his voice.

"The stupid beasts!" he said crossly; "it is impossible to take sure aim at the bear, while they jump about her like imps in that fashion; and yet it must be done, or she'll injure one or other of them. Yes! it must be done, even at the risk of hurting them myself, for we can't dispense with one single dog just now." He lifted his gun and slowly and cautiously took aim; keeping his finger on the trigger, and watching a favourable opportunity. At length he fired, and at once, as if struck by lightning, the bear sank on the ground with a shrill cry. The shot had gone right through the head, and none of the dogs were wounded. They threw down the little one and soon settled it.

Some of the sailors now came up and helped to skin the bear, and cut it in pieces. The flesh was a most welcome addition to the provender for the dogs, and the little cub furnished a sumptuous meal for the men, who pronounced it excellent.

It was nearly noon before they were ready to continue their journey. The further they went the more piercing became the cold, but they stood it out bravely, determined to press on as far as possible. Two stores of provisions had already been deposited at the right distances, and all that remained to lay down was the third. Robert delayed this as long as he could, for he was always hoping to discover some traces of his father. At last, they came to the foot of an enormous glacier that rose up before them like an insurmountable wall, and completely barred any further progress. Robert did his best to get round it, but the extent was far too great. It was therefore determined to make this the last station, and lay the remaining depôt right in front of the glacier. In effecting this they pursued the same plan as with the other stores, burying them carefully in some hollow between rocks, and then covering them with huge lumps of stone, so heavy, that it required all their exertions to drag them to the spot. Quantities of small stones were next collected and heaped over these large lumps, and the whole was then made into one compact heap, with a mixture of sand and water: Hans thought that this would be ample protection from the attacks of the bears, who, no doubt, would pay the stations a visit, and try to

get possession of the provisions. They would only break or blunt their claws for their pains, as the sand and water froze into so solid a substance, that it would resist all their efforts.

"We may be quite easy on that score," he said to Robert, who had expressed some solicitude on the subject. "The bears will just have to content themselves without; for I pledge my word that if we come back here next spring, we shall find everything quite untouched, just in the same order we left it."

It was time to think of returning to winter quarters on the ship, but Robert delayed one entire day to search with Hans, over all the country round, for any traces of his father. However, it was quite useless. So they finally resolved to suspend all further operations till the winter should be over.

Of course, the homeward journey was made much quicker, as the sledges were empty, and the dogs had been well fed, and had a good rest. They raced along over the smooth road, and left many miles behind them every day. The men were all in capital spirits, though they suffered considerably from the increasing cold. At length the ship was safely reached, and the travellers were welcomed back with loud shouts and huzzas over the success of the expedition.

Everything had been satisfactorily accomplished, without injury to any one, save a few frost-bites which the surgeon's remedies soon removed.

(*To be continued.*)

Knots and their Uses.

II.—SIMPLE KNOTS AND LOOPS.

WHILE the old sorcerers used knots in their incantations, the witches of Lapland sold "wind-knots" tied on a rope to their seafaring customers, who, when they wanted a particular wind, instead of whistling for it, untied the corresponding knot; but with what success we know not. The Davenport brothers "raised the wind" by their knots in a different fashion. They were adepts in the art of making slip-knots, which they alleged to be tied and untied by supernatural agency. A well-stretched rope and the "Tom-fool" knot baffled even the spirits when judiciously applied. A rope to hold tight when tied tight should always be well stretched. The power of tension in a rope is considerable, as Blondin found out; and to those who are in the habit of packing goods or even trunks, this power of giving way is sometimes a source of considerable annoyance, often aggravated by ill-tied knots slipping or becoming loose. In the nautical world, cordage and cables are always stretched and their strength tested before being used, in order to guard, as far as possible, the numerous human lives entrusted to their keeping. The old gaolers could tie a good knot on a well-stretched rope, if history is to be believed.

The simplest of all knots is shown by fig. 25. It is formed by placing the loose end of a rope through either an overhand or an underhand loop (*see* figs. 3 and 2). Fig. 25 shows the simple knot in its open formation, and fig. 26 when drawn taut. The perfect knot is known

as "the figure of eight" knot (fig. 27), is formed by an underhand and overhand loop overlapping each other, and the loose end passed through

25 26 27 28

the loop. When tight, as shown in fig. 28, it bears a close resemblance to the Arabic numerical 8 : hence its familiar name.

What may be called compound simple knots are known by the name of double, treble, four-fold, or six-fold knots. They are in constant use when it is necessary to shorten a rope a few inches, or to increase the size or strength of a holding knot to prevent it passing through an eye or a block. These knots are made by passing the end of a rope twice, thrice, or as many times as may be necessary, through a loop (as shown

29 30 31 32

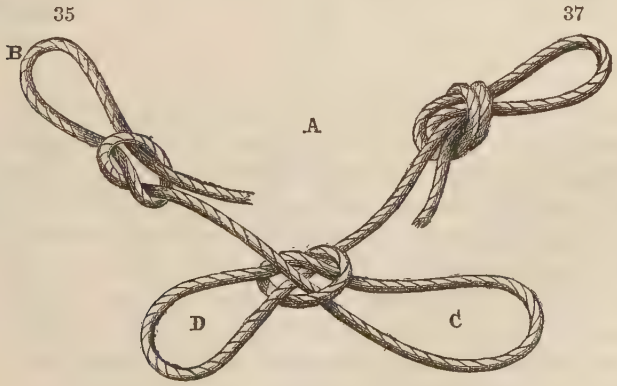
in the simple knot) previously to "nipping," or drawing it taut by pulling both ends. Fig. 29 shows a double knot loosely formed, fig. 30 when "nipped," fig. 31 a treble knot nipped, and fig. 32 its open formation. In fig. 33 we have a five-fold knot, shown open, and in fig. 34 its appearance when nipped. The five and six-fold knot forms a coil of handsome close folds, and is very useful to travellers who do not

33 34

wish to cut the precious cords of their baggage when on a journey, and to whom long loose ends are a special abomination. By and by, some "shortenings" which are more easily undone will be shown; but for short lengths, a couple or more of six-fold knots are useful and handy.

From simple knots the way is easy to loops, nooses, and running knots, which are neither the least important nor the least useful of the knots. To this class belongs the "Tomfool knot," which proved a puzzle knot for the Davenport spirits, and also the Calcraft knot, which has ended many a troubled life. The simple running knot is made by passing a hitch instead of the end of the rope when making a simple knot. (See fig. 35.) The variations of this knot are very numerous. A succession or chain of these running knots form the single plant or chain shortening, to which we shall have again occasion to refer. When the loose end A is knotted with a simple perfect or double knot, it forms one of the most useful and easily made loops, though its power of holding is not so great as either figs. 37, 38, or 39. When there is sufficient length of rope to permit its being let down double, it forms the best loop for lifting inanimate objects, as the hitch may be lengthened and then drawn taut, though fig. 40 is more commonly used for this purpose, as the pressure and weight of the object tends to tighten the grasp of the knot. If the end A is passed backwards through the loop B, it forms an excellent shortening knot, but is not adapted to bear a hard strain.

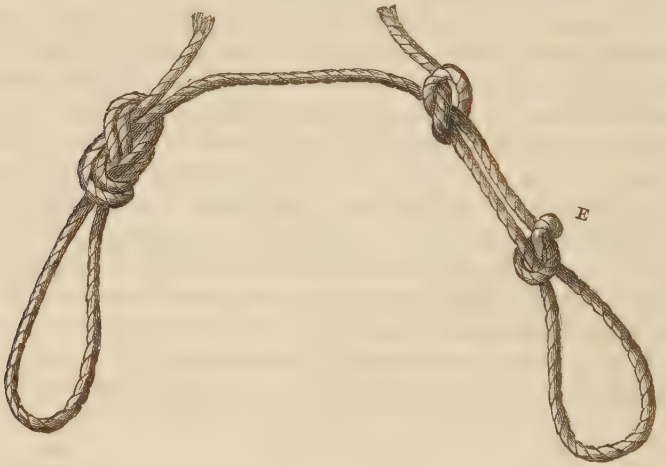
In its double shape, the running loop under the name of the "Tomfool knot" (fig. 36), has achieved greater renown than perhaps any knot of modern times. The Liverpool gentlemen who introduced it to the Davenport Brothers have been often asked for instructions how to tie it. It is a double loop through a simple knot. It is made in the beginning like the running knot (35); after which the firm end is passed



through the open simple knot, so as to form a double loop or bow. Thus, if the wrists or hands are placed within the open loops D C, and

the latter drawn tight, and the loose ends tied firm round the centre, a pair of handcuffs is produced which the skill of the Davenports could not untie. The firmness and security of the knot depends, however, on the rope being well stretched, otherwise a person with small hands would not have much difficulty in releasing himself from this or any other knot made on a rope.

The common loop knot (fig. 37) is tied similar to the open hand knot (figs. 11 and 12), and forms the ordinary useful loop of every-day life. A more ornamental and even stronger loop, which is well adapted for large cordage, is made by the figure 8 knot (fig. 38).

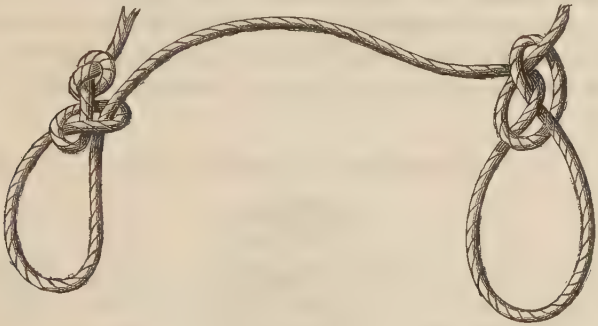


38 39

This loop, like fig. 37, when once made and has been subjected to a lengthened strain, is very difficult to untie. In this case there is nothing better than a running knot with a check knot E (fig. 39), which is a modification of the fisherman's knot, and will be found eminently serviceable. In this knot, the simple knot E is tied over the running line, as shown. After use it may be easily drawn apart, the loop slipped, and the knot untied in a comparatively brief space of time. This is a very suspicous knot in all puzzling performances, as it can be easily unloosed by a slight effort of the ancle or wrist; when the loop is carried round a chair it may be slackened or tightened in an instant.

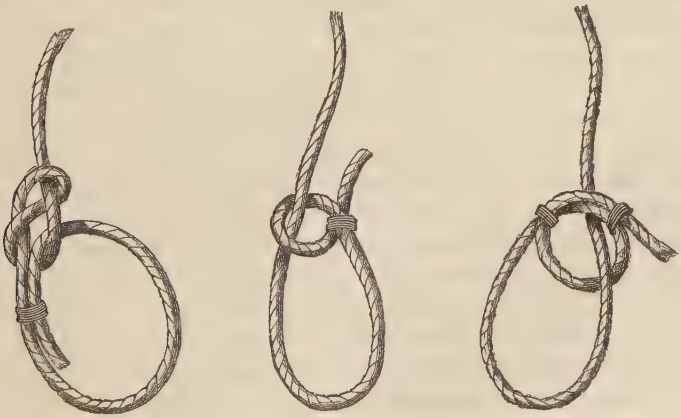
It was not an uncommon event in pre-Davenport days for some mountebank to allow himself to be tied hand and foot, put into a sack or small cupboard, and emerge in a few seconds with the cord in a neat

coil in his hands. There are but few knots which will not give way in a new rope sufficient for a man to release his hands, and then the rest is easy. Speaking as a rule, the more rope the easier the release. When two persons were confined together, the chances were largely increased in favour of the exhibitors, for if one could struggle a hand through the embarrassing cords he could release himself and help his fellow. The experiments of Herr Dobler prove that the knots were



40 41

tied and untied irrespective of either extraneous or spiritual agency, for the knots were sealed with wax, yet the hands were released and rebound again in the course of a few seconds.



42 43 44

One of the most common and useful of running knots used in commerce and only applicable to small cords, is the running noose

(fig. 40). A simple knot is made on the end of the cord, which is then simply knotted round. The running noose (fig. 41), known as the crossed running knot, is a useful knot in packing heavy goods, as well as a useful anchor fastening. Many visitors to a seaport have watched the tars at work on the outside of their vessels suspended by a rope whilst they sat comfortably in a bowline knot (fig. 42). This knot is formed by passing the loose end through the lower loop of a figure 8 knot, and "seizing" or tying the end with small cord or marline. Figs. 43 and 44 represent two slip clinches, or open running knots, "seized" instead of tied. No. 44 is used to clench a sailor's knot.

In our next we shall treat of ties and fastenings. In the meantime we show

SHAKESPEARE'S SIGNET RING, with

A TRUE LOVER'S KNOT.

Velocipedes.

THE VELOCIPEDE OF THE DAY.

The Bicycle.

IT would have been a slur on the mechanical genius of a manufacturing age if no machine could be invented to enable man to have quicker, easier, and safer modes of transit than those which depend on expensive appliances and combination of labour and capital, or those which rely on animal assistance. Some of our best machines are the simplest, and inventors have too frequently erred by using complicated movements when the simple ones were within their grasp, and far better adapted for their purpose. Thus it is said that Watt devised a thousand schemes for turning a vertical into a rotary or an horizontal one, but did not think of the crank. The simplicity of the dandy-horse, or, as we should term it, the Von Drais velocipede, was all that could be desired, but it unfortunately did not utilize the power of man. The extra-speed was gained at a vast expense of power. The wheel-horse of that day was not under control—it was crude. It wanted the crank, and unfortunately for the enthusiastic velocipedists, it was not adapted to it. When cranks were used they were adapted to a four or three-wheeled carriage, with what success I have shown. Cogs, pinions, cranks, wheels within wheels, and all mechanical contrivances to gain power did so at the expense of speed; and though many of the contrivances are admirably adapted to enable invalids to move themselves about in a Bath chair,—nay are even now manufactured for that purpose, nevertheless for speed the power must be applied direct, and how this has been accomplished a glance at the American patent records will speedily show us.

First in point of time was the "Cantering Propeller," invented by Mr. P. W. Mackenzie, a citizen of the United States, who in 1862 patented in America an automatic horse (Fig. 1), and has since re-

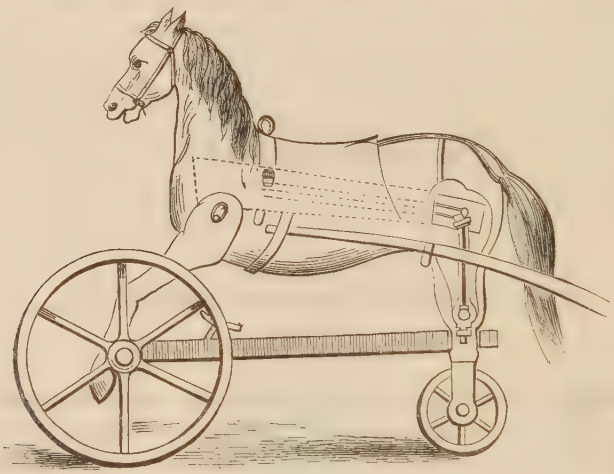


Fig. 1.—The Cantering Propeller.

issued the patent with a view, evidently, of covering the whole ground of American manufacture now in dispute between Messrs. Witty and Smith for the Lambelle principle. The claim has been reissued in the following terms :—

1. I claim in combination with a saddle seat for the rider, the employment and use of a cranked axle, arms, and foot-rest, so arranged that the power applied by the feet of the rider shall give motion to the vehicle, substantially as described and specified.

2. The combination of the following elements ; namely, a saddle seat for the rider, a cranked axle for propelling the vehicle by power applied by the feet of the rider, and a steering mechanism, so constructed that the direction of travel of the vehicle may be governed by the rider, substantially as described and specified.

3. The universal joint, in combination with the fulcrum of the vehicle and the steering wheel, constructed and operating substantially as and for the purposes specified.

4. The hinged legs in combination with the body of the horse and with the cranks, substantially as and for the purposes specified.

5. The foot-rests upon the arm, substantially as and for the purposes specified.

6. The double-armed levers and diagonal cords in combination with the handle and steering-wheel, substantially as described and specified.

There is no doubt that this claim embraces all the essential points of the modern bicycle.

A Monsieur Rivière describes in the patent journals his improvement on the old dandy-horse. He fixed the axle of the front wheel so that it rotated with the wheel itself, and passed through headings formed in the vertical steering-fork of the vehicle, and each end of the axle was provided with a crank having a balance foot-plate, so that the rider could give motion to the machine through the cranked axle which actuated the front wheel, instead of pressing his feet against the ground as in the old arrangement. This is the exact arrangement of the modern bicycle driving-wheel. He also points out :—"In constructing a velocipede according to this invention, I prefer that the seat or saddle should be supported by a spring, and that a cross handle should be provided for actuating the vertical steering-fork of the front wheel, such cross handle being connected by a strap to one end of a lever of the first order, having its fulcrum in the main beam of the vehicle, and the lever being so arranged that by partially rotating the cross handle upon its axis the front end of the lever is drawn up, and its lower end simultaneously actuates a spring brake, which is pressed against the periphery of the back wheel of the velocipede, thus retarding its motion as desired. When not required to be used, the lever is kept out of action by a spring provided for that purpose. The two wheels must be in a line with each other, and I prefer that the front wheel should be somewhat larger in diameter than the back one." Had M. Rivière completed his specification, and added the necessary drawings, he would have been the patentee of the bicycle. Whether he was the inventor, or whether he had previously seen the French or American bicycle, we have no means of knowing.

Thus, like many useful inventors, the real inventor of the modern bicycle is open to grave doubt. The simplest form and the easiest made by amateurs is shown in Fig. 2. If this velocipede was made with a brake, either self-acting, as in Fig. 5, or with a cord to the guide-handles, it would be peculiarly well adapted for heavy men. It has the simplicity of the old dandy-horse with the power and improvements of the modern bicycle.

We are now face to face with the most popular form of the French bicycle (Fig. 3). The pattern is that made by Mr. Lisle, of Moorfields, Wolverhampton. It is fitted with lamp and brake complete. The brake

is worked by turning the guide-arms. It has all the essentials both in theory and in practice of a first class and useful velocipede.

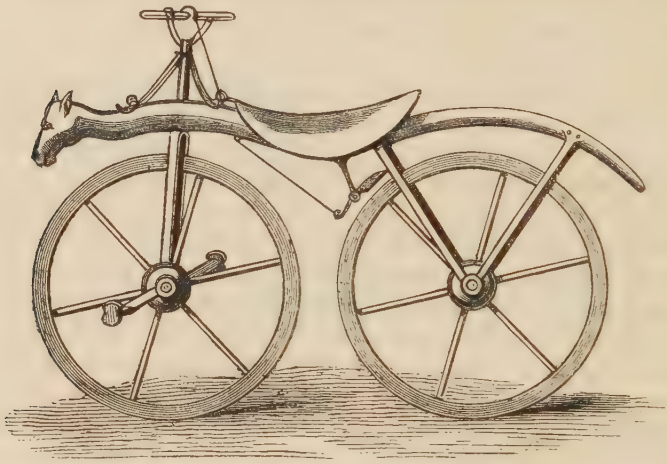


Fig. 2.—The Bicycle.

A very strong, popular, and showy form of velocipede is that shown at Fig. 4. The brake can either be made self-acting by the action of

Fig. 3.—The French Bicycle.

the iron frame on the hind wheel, or a brake may be placed as shown in

the French bicycle (Fig. 3) preceding. I have shown the triangular reel-treadles in place of the weighted slipper.

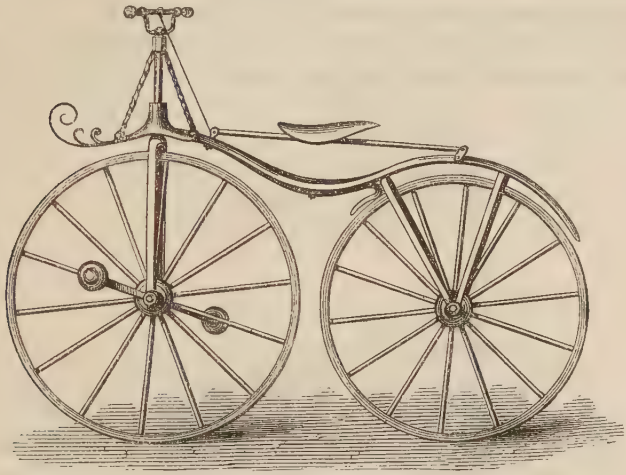


Fig. 4.—Parisian Bicycle.

When the bicycle reached America, the various manufacturers introduced improvement and varieties of patterns. The pattern known in America as Pickering's (Fig. 5) has become known and popular in England as the American bicycle. The saddle is supported on a spiral spring, and fitted with a self-acting brake beneath.

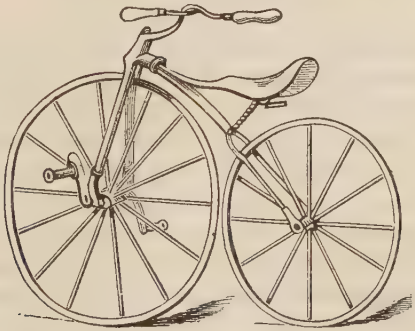


Fig. 5.—The American Bicycle.

The patentees claim for this pattern great credit. They affirm that it is simpler, more durable, lighter, stronger, and cheaper than either of the French patterns. The great feature of difference is, however, the connecting apparatus. In this the saddle-bar serves not only as a seat but as a brake, and is not attached to the rear wheel. By a simple pressure

forward against the tiller, and a backward pressure against the tail of the saddle, the saddle-spring is compressed, and the brake attached to it brought firmly down upon the wheel.

Another of the American patterns is the one introduced by Hanlon Brothers (Fig. 6), and known by their name.

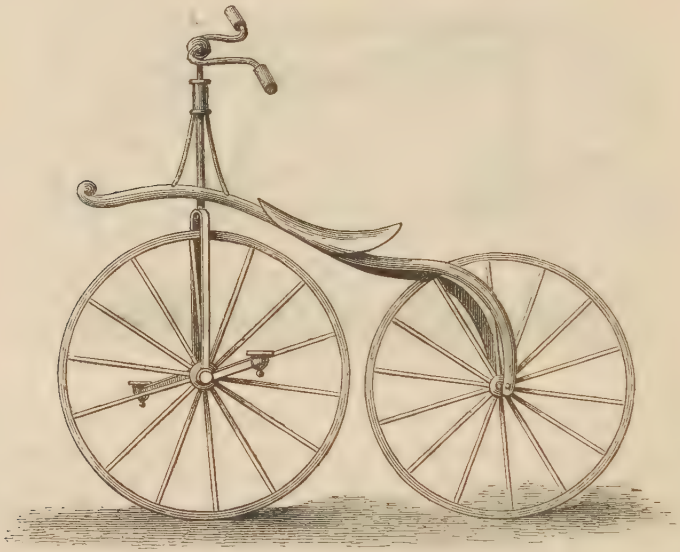


Fig. 6.—The Hanlon Velocipede.

In this the extending or slipping crank for the pedal was made a feature. The bearings of the guide-fork admit of easy lubrication and cleaning. The saddle is placed on a spring of wood or metal. Its great drawback is the want of a brake. It has met with little favour in England, though its simplicity and strength deserve a favourable consideration.

There have been some modifications of the bicycle patented. One notably by Mr. W. E. P. Gibbs, of London, in which the hind wheel is driven by cranks, whilst the front wheel is very small, and is simply used for the purpose of guiding the vehicle. The experience of all velocipedists points to a large driving-wheel in front as the best and easiest to work.

The American papers mention the invention of a velocipede of an entirely new style, called the "Keystone," invented by Professor Lowback, of Philadelphia, and so named by him in honour of his native state. It has but two wheels, and the seat is quite low between them.

The novelty consists in a cog attached to the guiding-post, by means of which the rear-wheel is made to follow directly in the track of the driving-wheel. The description is not very explicit; but we are further told that no matter how short the curve, both wheels make it at the same time, and the seat always remains parallel to the driving-wheel. In the other machines there is no guide to the rear wheel, and consequently the machine cannot be turned so readily when a collision is threatened. In practice, however, this alleged drawback does not exist, as the French bicycle can be turned round almost in its own length. In a room or riding-school no doubt the "Keystone" would be useful.

The Tricycle.

In all probability the three-wheeled velocipede will have a more enduring and wider-spread popularity than the two-wheeled. Not that those in present use are safer or even easier to guide than the bicycle, but they permit the body to remain in a sitting posture when going down hill and when the machine is at rest. An artist can sketch from the seat. It can be taken to a shady nook while the luncheon or quiet pipe is enjoyed, and what is lost in speed is made up in comfort. There, are, however, some drawbacks. Strange as it may appear to the uninitiated, the tricycle is far more likely to upset the tyro than the bicycle. Some modifications in the form of the machine have been made which bid fair to remove this objection.

The simplest form of a tricycle is shown in Fig. 7. It is one of those manufactured by Mr. Lisle, of Wolverhampton, and is known as the German tricycle. It is, in fact, a converted bicycle of the American pattern. The rear wheel is removed, and its place supplied by a pair of wheels, running free on an axle two feet long. The motive power is supplied by the crank pedals attached to the front axle. There is not much loss of power in this form of bicycle, but there is a tendency to turn over when the machine is not running on the crown of the road.

The Americans cling pertinaciously to the direct action principle, and whilst they have recognised the disabilities under which the bicycle labours, they have endeavoured to overcome these blemishes without reverting to the treadle and lever. A machine has been invented by Messrs. Topliff & Ely, of Elyria, Ohio, which attempts to combine the advantages of both the bicycle and the tricycle, by means of a depressed V axle to the rear wheels. This axle, by means of a lever, enables the rider at will to change the distance between the hind wheels from two feet to two inches, or less, so that he can practise in the beginning on

the three-wheels, and as he gains confidence can change the machine practically into a bicycle. Fig. 8 shows a perspective elevation of

Fig. 7.—German Tricycle.

this machine, with diagrams showing the action of the rear wheels. They may be made to run on any portion of the axle, and are prevented

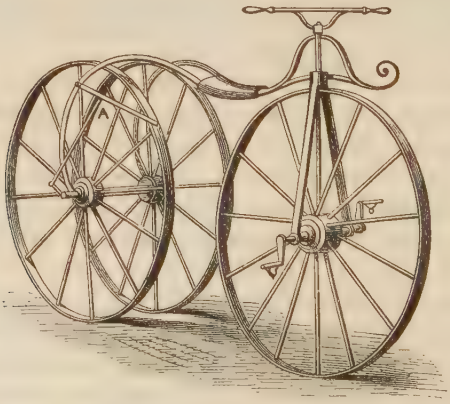
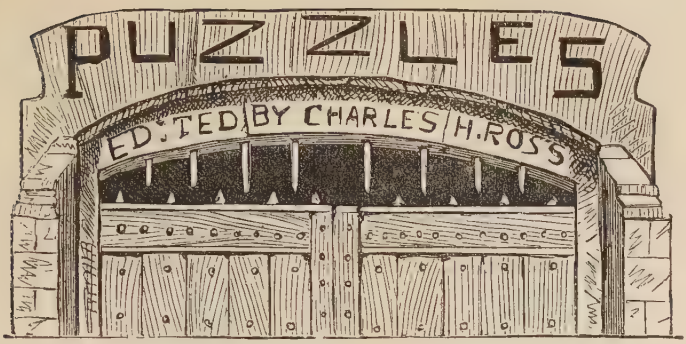


Fig. 8.—The Elyria Velocipede.

from coming together by the fixed collar at B. The lever for turning the axle is shown at A.

(*To be continued.*)



1.

I am a word of 15 letters.
My 4, 14, 6, 3, 12, 2, 7, 10, 12, 8, 5, 15 is establishment.
My 13, 9, 3, 7, 8, 6, 4, 12 is animated.
My 6, 11, 12, 2, 5, 9 is people.
My 1, 8, 3, 4, 14, 10, 15, 7 is deduction.
My *whole* is separation.

2.

Three-quarters of a snare, three-fifths of that which is not real, and half a space of ground.
Name a great sea fight.

3.

My *first* the beggar knows full well,
In a hat you'll find my *second*,
My *third*'s accompanied by a bell,
My *whole* a ragged boy is reckoned.

4.

My *initials* read down give the name of a great battle, and my *finals* read down give the name of a great man who won it.

1. A famous Prussian Marshal.
2. A King of Arragon.
3. An Indian prince.
4. A great battle (naval).
5. A pasha of Egypt.
6. The discoverer of Newfoundland.
7. A town in India.
8. A female martyr.
9. A town in Austria.
10. The assassinator of a French King.
11. A battle fought by the British in Spain.

Books.

5. Def foak live with care.
6. Moody Ben—Sad.
7. Send Dinn, go, catch your bird or fish.
8. Ho! F.N.L. The injun lax game.
9. Steer yar, madman!

Word Squares.

10.

Attest.
An ailment.
Sound.
Care.

11.

Pain.
Water.
Void.
Bitter.

12.

A fish.
Inner part.
A space.
Scarce.

13.

A face.
An image.
To burn.
Conveyance.

14.

A plaything.
A mixture.
A perverter.
Lesson.

15.

Cryptograph.

Z myy sictd jq qe blehflv ebkg,
Az Lcsvct'r tcne jl gufpa kblf-hnnnzorgc ;
Mcz sbjknogu pt gvr Myvho lclf ;
Zws jd cm Flikjdj sfpo af ucmucf,
Fjtg xpst mfvv mfgigcmwg csv z gyv,
Gf'jn fjtg xps dzdi cr hmqc, blf sfjn xps—
Vhu-dqq-uyv.

16.

My *initials* and *finals* are two fruits.

1. A fruit.
2. A girl's name.
3. Belonging to a nose.
4. A beheaded bark.
5. An Arabian.
6. Head.
7. A clergyman.
8. A laugh.
9. All.

17. Why is the letter R like St. Petersburg ?

Men of the past.

18. R, School them puir cubs.
19. He felt a drag ter.
20. Ella C, noisy ward.
21. R. Nero, come with a quill.

22.

A corporation.
A flower.
A Turkish Governor.
Talk.
A port of Asia.
A town of Illyria.
An ancient town of Italy.
A tree (backwards).
A. D.
A town of Switzerland.
Rocks.
Wished.
A composer.
An English town.

The *initials* will give the name of a writer, and the *third* letters and *finals* two of his works.

Hidden Books of the Bible.

23. It was a test he rarely experienced.
24. Art thou Eugene, sister of our playmate Charles ?
25. Those articles were published in the *Young Gentleman's Magazine.*
26. A few paces from the animal a child stood heedless of the danger.
27. It was a Porto Rico loss, I answered.

28.

The *initials* and *finals* of the hidden localities read downwards form the names of two antagonistic countries.

1. At a wedding, at St. George's, the bride wore a magnificent ring.
2. The dry spring was followed by a dreadful, sterile summer.
3. The proud pig then proceeded to the platform, and propounded therefrom each point of porcine policy.
4. Jenkins, a fat boy, was knocked down by Watkins, a lean one.

5. Unless you *cut off the last letter* of this place you'll get tricked out of your acrostic after all.

6. Gilbey & Co. make mention of this part of Burgundy on neatly-labelled wine-bottles.

29.

Cryptograph.

Bovx bknwxiuz bovmt bvszo bsiu bovxwn
Bsumrowmi bonwxu,
Bpnsrrcx bovxe bom bovd bzmtc bymov
Bvmmaz bmk bzoxxc,
Bjto bum bimo butcc bovd brsci bymov
Bxioxnoswiexio
Bmk bxsbv bixy-vsobv'u btikc-xup'u
Bmensux.

30.

Word Squares.

A coin.
A custom.
An Irish town.
A kind of quartz.
An opinion.

31.

A block.
A noise.
A house.
Pieces of land.
A string.

32.

A town in Wales.
A lake in Russia.
A Swiss town.
A part of dress.
To frequent.

33.

A fine art.
A name.
An end.
An English river.
A Northern song.
A town in Italy.
A physical feature.
A transposition.
A country in Africa.
Behind.
A city in England.
An adverb.
A play.
A vessel.

My *initials* name a tale, my *finals* its author.

Hidden Battles.

34. 203 E near K.

35. 1,100 ataquep.

36. 0051 ferns.

37. 302 haha! wan.

38. 7 O! tart.

39. 200 Doune.

40.

Cryptograph.

Mxkix erwx aovxt rkb rkhvjsz irox
Crfm ywrip qvztjofskx'z yrwxtsw forvk.
Cmxox exkzvux zjoojez xuxo oxvak,
Jo tvww zjqx boxron irux jt brox bxzervo
Twn fj njk qjskfrvk'z wjkxwn yojc
Wvzf fj fmx fxqexzf,z fojsywjsz ojro,
Qvimrxw Fnzjk.

Famous Romans.

41. Rum pious bull, Irig Siva.

42. Oh! can I trust a lucus quifs?

43. Usual crops of ice bliss a Punicsruin.

44. I Lacus, iles, suit auc ring.

45. L Suit, tie up Bunser.

46.

The *initials* and *finals* read downwards will give the names of a king and of a wizard who frequented his court.

That by the strength of which the king won and kept his kingdom.
A flower.
A castle.
Part of the king's palace.
A Swiss canton.
A bird of ill omen.

47.

A spout.
A cigar.
Naked.
Straight.
The turn of the tide.
An animal.
The highest.
To see.
To part.
A bright light.

The *initials* read downwards will name a sign placed outside my *finals*.

48.

Whole, I'm a part of a chain; behead me, I'm a part of a famous battle; transpose my first three letters I'm nothing; transpose the whole word, I'm a hot place.

49.

I am the name of a country; transpose me, I am what every one is anxious to keep clear of, and yet what every one should try to take; drop one letter and I am used for domestic purposes; curtail and transpose, and I am what we all enjoy.

50.

The *initials* read downwards, and the *finals* upwards, will name two statesmen, famous in their day.

Level.
A European river.
An animal.
A girl.
A conjunction.
Notoriety.
A book.
Security.
A period.
A blow.
Awful.
To stray.
A European river.
A measure.

SEA-SIDE.

AT THE SEA-SIDE.

WHEN the flowers of May begin to pale beneath the fierce rays of a Midsummer sun, there comes over all a longing for the fresh breezes and delights of the sea-side. The stuffy, close streets of town and city seem unbearable, and the vacation unreasonably distant, as well as slow in coming. Country-bred folk wish the haymaking season were well over, so that they may snatch a breath of the sea-breeze during the interval between haymaking and harvest. There is a healthy instinct which carries all to the sea-side: even its fishy odours are fragrant to the nostrils of the inland-bred, and its sights and sounds delightful to eye and ear.

Who does not recollect his first visit to the abode of old Father Neptune, and the sensation of rapt pleasure which crept over the soul as the mind gradually took in the idea of the power and vastness of the everlasting ocean?—

> "While on the sea, that look'd of gold,
> Each toy-like skiff and vessel bold
> Glided, and yet seem'd still;
> While sounds rose on the quiet air,
> That, mingling, made sweet music there,
> Surpassing minstrels' skill."

One could stand enraptured and enthralled for hours, forgetting that there are duties as well as pleasures of life, even at the sea-shore.

As the mind becomes familiarized with the associations of the sea-side, there ensues an earnest longing to leap into its bosom, and lave in its

heaving waters. It is delightful to wake in the early morning, when the sun is shining in at the windows, and after a hasty toilet which would not be countenanced for a moment elsewhere, sally forth for the early dip. In crowded watering-places there is no help but the bathing-machine; but if you can swim, choose, if possible, a plunge from a projecting rock into the clear pellucid water, if the swell is not strong enough to dash you against the iron sides of your dressing-place. The most enjoyable swim is always that taken from a boat; but this is not always available, and requires some practice to scramble back again. But few bathers know the delight of bathing in a rolling swell coming on shore. It requires a strong nerve to jump from a boat-stern into the heaving waters when they are crested landward with the sparkling foam; but there is no bathing to equal it if the boatman knows his duty and the swimmer his craft. See how deftly he plunges through the advancing breaker, and rolls down the green water, covered here and there with the snow-like drift of storm-lashed waves, ere he is lifted by the chasing wave in an exhilarant and glorious manner, as if he were the favourite son of a sea-king. This kinglike mode of bathing is hardly to be taken by the bravest of our British boys, even when well practised, unless it can be taken from the punt of a yacht, or the side of a fishing-boat, where he has been sleeping at night. The majority must be content with shore-bathing, and an occasional stretch out seaward in calm weather. Sometimes when the bright morning happens to succeed a stormy night, and the bathing-machines are drawn up out of reach of the advancing tide, a very enjoyable bath may be secured by advancing steadily into the water in a crab-like fashion; for no greater mistake can be made in a current than to present both legs to the action of the stream or wave. If you court misfortune by so doing, you will speedily find yourself *hors de combat* on the beach, or plunging about without a footing. In fording rivers it is well to remember this; and in bathing in broken sea-water, it should never be forgotten. As a breaker approaches, meet it by a side jump towards it if it is a small one; if a tall one in deeper water, but hardly deep enough to swim, plunge headforemost into it, and let its beetling crest pass over you on its way to the shore. If this is done readily and quickly, you can hardly come to grief ere you reach the more pleasant and smoother swimming-ground. In returning, it will be necessary to keep a sharp look-out for advancing breakers, until you can make a run of it to the beach.

Perhaps there is no exercise so appetizing as a swim in the sea, and, after breakfast, nothing so delightful as a stroll along the cliffs when

the tide is in, clothing the shingly beach with azure waters,—for the water does look blue under a clear sky, notwithstanding the assertion that blue water is only met with on the Atlantic coast and in deep water. What a different Flora do the cliffs present to us; what a contrast to the rural lane. Here and there you may see the parent of our sweet-scented garden stocks in a crevice of the cliffs. Along the margin is the home of the Burnet rose, and close by the grassy-looking thrift may be found in bloom. Much more familiar will be the sea-side bladder-campion, and even the Nottingham catchfly will remind one of home. How different to these is the yellow-horned poppy, which flaunts its many-branched stem and crumpled golden petals in many a nook, forming a contrast to the feathery boughs and pinkish flowers of the tamarisk. Amongst the grass we may find the beautiful and brilliant flowers of the sea-heath. Later in the year, when the summer melts into autumn, the sea-purslane and sea-holly may be found in bloom. A sprig or two of the latter, mixed with a few sprays of sea-lavender, will form a permanent bouquet of the sea-side; a memento of the visit when far away, as both these plants will keep their form and colour for many weeks. On our return, when the tide is out, or amongst the fissures of the cliffs, we may meet with the sea-pea and the sea-convolvulus trailing amongst the stones. Where the soil is marshy we may add the tassel-grass and the sea-milkwort to our collection.

It is when the tide has run out, and left a vast expanse of shore open to our inspection, that the wonders of the ocean and ocean life become visible to us, and excite our curiosity. Beautiful, indeed, in colour and form are the various algæ, or sea-weeds, which stud the rocky *débris* of countless storms, or float in the tiny pools left by the tide. They might truly exclaim,—

> "Call us not weeds—we are flowers of the sea,
> For lovely and bright and gay-tinted are we;
> Our blush is as deep as the rose of thy bowers,
> Then call us not weeds—we are ocean's gay flowers."

Amongst them we shall find the edible laver, the purple ribands of the *dilesk*, the succulent carrageen moss of the druggists' shops. These are amongst the smaller varieties. The larger algæ, which are collected for manure and other purposes, are the tangle, and the long species known as *Fuscus esculentus* (*Alaria esculenta*), sea-laces, or sea-whips. The knotted Fuscus, which has a number of apparent knots throughout its length, is also common. These knots, however, are only air-bladders, useful in the economy of marine plant-life; but how full of suggestive influences on the thinking mind!

On many of the cliffs, particularly on the west coast, the gay lichens cover the rocks with the brightest tints of the painter's palette. Many of them were actually articles of commerce in the pre-Christian era, and formed a portion of the materials used in producing the famous Tyrian purple. Small as they are, these humble plants form a connecting link with the age of Alexander. Thus do we find "sermons in stones," even by the sea-side.

In the first blush of youth, it is delightful to persuade some old tar or ingenious boatman to fashion a small vessel that will sail on the artificial seas dug in the sand or on some shallow pool of real sea water, where the young crabs peep out at the miniature bark as it floats boldly over the tiny ripplets. In an older age we become learned in schooners, luggers, brigs, brigantines, and full-rigged ships. We learn to know the difference between a Dutch galliot and an American clipper, which is easy enough, but it is not so easy to tell whether the far-off vessel is French, Italian, or Greek, by its rig. When permitted to take a cruise with Jack Buntine in his yawl, or ramshackled old hooker, the sea-side becomes doubly pleasant. It is almost as joyful as having a yacht of one's own. It seems as if we were veritably a sea-king when we can put the helm "hard-a-port" at the word of command, or haul at the braces. No lesson is ever learned so quickly as the names of the boat-gear. Boom, bowsprit, stays, rattlins, shrouds, mainsail, jib, foresail, come to the lips as if it were the natural language and not an acquired task. We learn to tack, steer, reef, and other items of boat management, which are never forgotten, and which in after-life come in so often useful in unlooked-for emergencies.

One of the best of amusements at the sea-side is fishing, and curiously enough but few practise the "gentle art" at the sea-side. Yet there is good sport to be obtained from a jutting point of rock with rock perch, scad, and occasionally a sea bream may be caught, if the tackle is strong enough and the hook baited with garbage. There is excellent sport to be obtained in catching whiting and whiting pollack, and sometimes the latter will yield some excellent diversion as well as try the skill and tackle of the angler. The pollack is fond of the silvery sand-eels and hair-worm found in digging up the sandy beach at the ebb of tide. In rock fishing, the best baits will be a small smelt, shrimp, cockle, periwinkle, or a lob-worm; but if a boat is used, no rod will be needed, and in that case a paternoster line, with a good-sized bullet above the highest hook, and a long cord will be needed. Different baits may be placed upon the various hooks, and the line may be cast as in trolling a long distance and drawn towards the boat. The best time for this kind of

fishing is early in the morning, and after sunset in the evening. On some parts of the coast, particularly on the west and south-west coast, large quantities of hake, ling, bream, and conger-eel may be caught at night, and there are but few localities where a few hours' fishing may not be obtained. Near a tidal river or estuary, smelts, flat fish, and whiting may be freely taken with a rod and line, particularly near an old pile-supported pier or bridge. An hour's amusement may be frequently obtained on rocky coasts at low water by catching crabs with a weighted piece of string, which is drawn over the rugged bottom, where the inanimate bait is seized by the crab, who holds on until drawn to the surface.

A new world is thus opened up to the inland dweller. He stands on the verge of the illimitable ocean—the highway of the world's commerce. Who can visit or leave it without his ideas being expanded and his mind enlarged? We visit the sea-side with pleasure, and leave it with regret, as becomes the children of the old Vikings who ruled the waves, and have carried the cross of St. George to every known land. Sad will be the day when English children cease to love the sea and the pleasures of the sea-side. B.

Stephen Scudamore the Younger;

OR,

THE FIFTEEN-YEAR-OLDS.

A STORY OF BOYS' ADVENTURES AT HOME, ON BOARD A PASSENGER SHIP, AND ON THE AUSTRALIAN GOLD-FIELDS.

By ARTHUR LOCKER.

PART V.

My First Night in a Tent.—The Aristocratic Pie-merchant.—Arrival of Captain Spanswick.—Governor Latrobe and his Boot-black.—Capt. S. makes a Speech.—Fifteen Pounds a Head wanted.—Prawle's Perplexity.—I relieve him.—Señor Gonzales Robinson.—The Horse-Bazaar.—We go into the Arena.—Use of the Lasso.—Prawle treats a Horse in "the London Style."—Bravo! Long Legs!—The Story of the Man from Gipps' Land.—Livery Stable *v.* Open Air.—Naming the Horses.—We move the Tent.—Captain Spanswick's Instructions in Pistol Practice.—We are divided into Three Watches.—The Dead of the Night.—Gonzales' Tale of the Mexican War.—The White Figure.—The Shot from the Carbine.—The Groan.—The Discovery.

I DARE SAY there are some boys who will read this history of my adventures who have never slept out of a comfortable bed in their lives; so perhaps they may like to know how another boy felt when he slept for the first time with only a blanket between him and the bare ground, and nothing between his head and the stars but a thin sheet of calico. But we must remember that there are all sorts of tents; there are such tents, for instance, as great officers of state use when they are making a progress through some Indian province. These tents are splendidly elaborate constructions, so big that they contain several rooms, and when folded up are carried on the backs of elephants, and so well furnished with chairs, and tables, and bedsteads, and hangings of scarlet

cloth, and rich carpets, that you would easily suppose yourself to be in an elegant little house. Our tent was a much humbler and simpler affair. It was of an oblong shape, ten feet by eight; it was supported by two uprights and a ridge-pole, and, as I have already said, it was made of thin calico. Stout canvas would have been a much more useful material, as I shall hereafter have occasion to show; but it was made of calico because our party had intended to go up to the diggings on foot, and a heavy canvas tent would have been a tremendous burden to drag over rough or muddy roads. The interior furniture of the tent was extremely simple, consisting of a tin bucket or two by way of seats, while our carpet was the bare earth, on which at night we spread our blankets; and crept in between the folds. Lest it should come on to rain, a trench several inches deep had been dug round the outside of the tent to carry off the water which in that case would pour down from the eaves. Luckily for our comfort my first night under canvas was beautifully fine; but it grew very cold towards morning, and I was not sorry when Harvey jumped up, and asked me to help him in lighting the fire and getting the breakfast ready. It is sometimes said that a person is not properly rested unless he has taken all his clothes off. I think this is only a matter of habit, and that if you take off your boots, and loosen your neck-fastenings, so as to allow the blood to circulate freely between your head and your body, you may rise as thoroughly refreshed after a night's slumber in a tent or in the open air, as if you had lain on a patent spring mattress with an eider-down quilt to cover you. Of one thing I am quite sure. A person is much more inclined to leap up actively in the morning from one of these rude and primitive couches, than from the soft and elaborate bed of civilized life. This is a luxurious age, and I sometimes think it would be a wholesome discipline for boys to harden themselves voluntarily while they live at home at ease, so as to be prepared for involuntary hardships afterwards. A friend of mine, though he had an excellent bed in the room, lay through the whole of a very severe winter on the bare boards wrapped in an old military cloak, and he assured me that his health was greatly improved by this rough regimen.

I need not describe our breakfast, for it was exactly like the dinner of the day before, consisting of tea, bread, and mutton-chops. This, with beefsteaks sometimes for a change instead of mutton-chops, was the regular meal three times a day all over the colony at that time. Such food did not seem so distasteful to me at the period of our landing as it became afterwards, because the weather was cool and springlike; but about Christmas-time, with a scorching hot sun overhead, and the

air full of buzzing flies, we longed for strawberries and raspberries, and melons and grapes, and salads; in fact we longed for just the very things that nobody except a rich man could buy. Nothing was cheap at that time except butchers' meat. I remember a day or two after I landed that I bought a mutton-pie for sixpence of a street-hawker. Such a pie in England would be all crust; there would be the least bit of meat in the middle, and that bit of meat probably would belong to an animal which said "mew" while it was alive. Now the crust of my Australian pie was as thin as a wafer, because flour was scarce and dear, but it contained a good pound weight of solid meat. By the way, the man who hawked these pies about was quite a character. Though dressed in a common blue shirt, you could at once see that he had not been brought up to pie-hawking. His hands were well shaped and delicate, he wore a long dandified moustache, and spoke like a well-bred gentleman. Every pie that he sold was stamped with the arms and motto of his family in England, and a very ancient and haughty family they were. This was his whimsical way of revenging himself on them. He declared that they had shamefully defrauded him out of some property, and he determined to disgrace their name by hawking mutton-pies, stamped with their heraldic insignia, about the streets of the antipodes.

I must now return to my own adventures. Just as we had finished breakfast, we heard the sound of a horse's hoofs approaching, and Lively Jemmy, clapping his hand on Harvey's shoulder, cried out: "I say, Tom, here comes your friend the captain!"

In a few minutes Captain Spanswick made his appearance. A smart dapper red-whiskered young man of small stature, very neatly and actively built. He was riding a stout brown cob, and except that he wore a Panama chip hat, was dressed as carefully as if he had just come from Rotten Row in Hyde Park. He wore a black coat of superfine cloth, a spotless white shirt, black necktie, and dark grey trousers, while his neatly-made boots could not have been more elaborately polished if he had kept a valet. My eyes were at once attracted by the captain's radiant boots, because Lively Jemmy had the evening before told me a story to the following effect. "The Governor's aides-de-camp, secretaries, clerks, servants, and labourers had run away to the diggings, leaving the Governor and his wife all by themselves. The Governor said to his wife, 'I have no objection, my dear, to your cooking or making the beds, while, as for myself, I will draw the water and chop up the firewood. But boots I dare not clean. What would the Colonial Secretary in Downing Street say?' So he advertised in

the *Argus* for a boot-cleaner. Although he offered liberal wages he only got one answer, from a gentleman who agreed to undertake this arduous office on condition that the Governor handed over to him the whole of his salary, still continuing to burden himself with the government of the colony. The poor Governor," said Lively Jemmy, "being unable to accept these harsh conditions, may be seen every morning in his verandah at Toorak polishing away like a member of Lord Shaftesbury's brigade." Of course I afterwards found out that this story was all a hoax.

"So these are our two new recruits, eh?" said Captain Spanswick, addressing himself to Harvey. "Good morning, Mr. Prawle; good morning, Mr. Scudamore," and he shook hands very cordially with each of us in succession. "A couple of fine fellows," he said to Harvey, in a half-whisper, which we could not help hearing. "What! only sixteen! He's fit for a grenadier. And the other—What a nice-looking face he has—a gentleman's son evidently."

Old Prawle and I were as pleased as could be when we overheard these compliments. I blushed so much that I was quite ashamed, and was obliged to stoop down and pretend to be doing something with my bootlace. Prawle could not blush, because his face was naturally bright red; but his great eyes twinkled, as they always did under the influence of any emotion, either pleasurable or painful.

Having dismounted from his cob, and tied him to a neighbouring tree, Captain Spanswick lighted a cigar, and invited us to join him in what he called a "palaver," though most of the talking was done by himself. "Gentlemen," he said, "I may consider that our party is now complete. We are six in number; and you will find six a very convenient number, as we can work on the diggings in two parties, of three members each." ("How does he make out six?" whispered Prawle to me; "I can only count five." But the captain immediately proceeded to answer Prawle's question, as if he had heard him ask it.) "You may wonder," he proceeded, "why I fix the number at six. The fact is that I propose, with your permission, gentlemen, to add another member—a highly valuable and efficient member—to our coterie. With your permission, gentlemen, I repeat; for, though I am your captain, I wish to consult you in all preliminary arrangements. When once we start on the road, discipline must be maintained. And here allow me to point out, gentlemen, your reasons for electing me as your captain." ("I never elected him at all," muttered Prawle, winking at me.) "Because you felt that I had experience. I alone of all this company had previously visited the diggings. You con-

fided in me." ("Hear, hear," cried Tom Harvey.) "You knew that with my practical experience, and, let me humbly add, my geological knowledge, if there is gold to be found anywhere, I am likely to put you in the way of getting it." (Great cheering.) "Gentlemen,—Do you continue to trust me?" (cries of "Yes, yes," principally from Tom Harvey.) "Then allow me to propose as a candidate for admission to our honourable fraternity my esteemed friend Señor Gonzales Robinson. 'A strange name,' you will say; but Señor Robinson is a still stranger man. He is a very remarkable man. He unites the impetuous fire of the Spaniard with the cooler fortitude of the Anglo-Saxon. You shall see him presently. And now I will tell you why I wish him to join us. We had originally proposed to go to the diggings on foot—I still adhere to that arrangement; but as the journey will occupy several days, I advise that we should do something which will not merely defray our expenses on the road, but leave us a handsome profit upon our arrival at Bendigo, besides relieving us from the drudgery of carrying our tent and bedding on our shoulders. You are aware that provisions are dear in Melbourne, but they are far dearer on the diggings—two hundred per cent. dearer at least. The price of cartage to Bendigo is twenty shillings a ton for every mile, or £110 per ton for the whole journey. The reason of this exorbitant rate is that the roads are in such a dreadful state for wheeled vehicles. Now why should we not, as my friend Señor Robinson suggests, adopt the Mexican system? Why should we not buy a few steady horses,—horses are the cheapest things in the colony next to bullocks and sheep—and why should we not load those horses with a carefully-selected stock of provisions, and take them up the road with us? They will cost little or nothing for provender, and when we reach the diggings we shall be able to make a handsome profit on both animals and goods."

"I say, Stephen," whispered Prawle to me, "it sounds very jolly, doesn't it? But how much will it cost, I wonder? and who's going to find the money? Captain Spanswick," he said aloud, "How much will these packhorses cost?"

"I was just about to speak on that point. Fifteen pounds a head, I reckon, ought to cover every expense. Such horses as we want may be got for ten pounds apiece, and the goods ought not to cost above three pounds more; the remaining two pounds will cover any accidental expenses. Each beast and his load will fetch at least thirty pounds on the diggings, as prices are at present."

"I'm willing to go in for it," said Lively Jemmy.

"And I!" cried Harvey.

"And I!" said the writer of this story, quite excitedly.

"Gentlemen all, and Captain Spanswick in particular," said Prawle, with great solemnity, "I should be delighted to join you, but circumstances compel me to say 'no.' It may not be known to you, but it is unfortunately well known to me, that a conspiracy exists among the Melbourne bankers against my signature; not one of them would honour my draft for fifteen pence, much less for fifteen pounds. I must therefore retire from your worthy company, unless," continued Prawle, glancing round, and rolling his eyes so comically that we all burst out laughing,—"unless there is any gentleman present who wants an active and enterprising young man to look after a horse and pack. I've no objection to the country, and I don't want a suit of livery."

"Prawle," I whispered, seizing his arm, "you must go with us. I can't part with you. I have thirty pounds—just enough to buy two horses and their loads. You shall pay me back when we get to the diggings."

On hearing these words, Prawle pressed my hand quite vehemently, whispering, "Stephen, you are a brick of bricks," and then once more rose to his feet. "Gentlemen," he began, "if I had tears, as Mr. Shakespeare says, I should prepare to shed them now. I am quite overpowered by the generous spirit displayed by this youthful capitalist —if I may so term him—who sits beside me. He has offered, gentlemen, to advance the funds necessary for the purchase of a horse and cargo." (Great cheering.) "Consequently, gentlemen, I willingly throw in my lot with the rest of you."

Soon afterwards Captain Spanswick introduced us with great ceremony to our new comrade, Señor Gonzales Robinson. He was one of the funniest-looking figures I ever saw in my life; and if he had walked up Fleet Street dressed as I saw him dressed, he would certainly have had a grinning mob at his heels. He was little more than five feet high, but enormously broad and muscular, with a flat nose, thick lips, and a nut-brown complexion. His dwarfish stature, his breadth, and his costume, combined to make up a most comical figure. He wore a bright green flannel shirt tucked into a pair of tight corded breeches, immense thigh-boots, and a great overshadowing Mexican hat with a bird's plume in it. But he did not look like a man at whom it would be safe to laugh. His face bore a stern, determined expression: there was the scar of a severe sword-cut on his cheek, and in his belt he carried a formidable pair of pistols. He spoke English fluently, but with a curious foreign accent; and, as Prawle whispered to me, was

probably half-nigger, half-Mexican, and half-Indian. In one hand he carried a heavy riding-whip, which was frayed and greasy with long service; in the other he bore a coil of rope, the use of which I did not at that time understand.

Señor Gonzales Robinson was a man of few words, but of prompt action. He listened somewhat impatiently to Captain Spanswick's explanations, and then said, "Is all settled?"

"All is settled," answered the captain.

"You would like to go up with packhorses?" continued the Mexican.

"Yes!" we cried.

"Then let us lose no time. To-day it is fine; to-morrow it may rain. Besides, to-day there is a sale at the Horse-Bazaar. We will divide into two parties: two shall go with you, captain, and buy the provisions; two shall go with me and buy the horses. Which of you understands horses?"

Tom Harvey and Jemmy Wallington were both silent. The former had been clerk to a Manchester cotton-broker; the latter had been apprenticed at Huddersfield. Both were smart, active fellows, but thoroughly town-bred.

"I have been accustomed, sir, to ride a pony," I said, modestly.

"Good. You come with me. And the tall young man?" he added, indicating Prawle.

The tall young man boldly replied that he had always had a taste for horseflesh. "I don't actually know much about horses," he said, "having chiefly witnessed their evolutions from the box of an omnibus, but I am ready to obey your orders, Señor Robinson. I'm always willing to learn a new trade."

"Good. You come with me too."

Accordingly, Prawle and I accompanied Señor Robinson to the Horse-Bazaar. The name sounded much grander than the reality, for the bazaar was nothing more then a large space in the open air, surrounded with a fence of posts and rails. In one corner there appeared a sort of hustings, on which stood the auctioneer, a loud-voiced, red-faced gentleman in a sporting suit and a broad-brimmed straw hat, with a little hammer in his hand, a cigar in his mouth, and a clerk at his side. The space within the railings was filled with a number of horses, mostly, as we afterwards learnt to our cost, unbroken colts from New South Wales, which had just been driven in a "mob" overland. They had never had a saddle on their backs in their lives, and were, to all intents and purposes, as wild as the horses on the South American pampas. Two or three rough-looking fellows, with sun-tanned faces and great beards,

who had their shirt sleeves rolled up to their elbows, and, in their hands, formidable stock-whips, the crack of which sounded like the report of a pistol-shot, lounged unconcernedly among the troop of horses, whose staring eyes, laid-back ears, and shrinking forms, showed that they were entirely unaccustomed to be gazed at by an assemblage of two-legged creatures in this fashion. Outside the rails there was a heterogeneous gathering of men of all sorts and classes. Dandified gentlemen in well-cut tweed suits, who wore folds of blue or green muslin round their hats ; storekeepers, draymen, car-proprietors, bullock-drivers ; besides a large collection of loafers, who merely came to the sale to pass away an idle hour, staring at the horses, and remarking on the prices they fetched. The sale had already begun when we arrived on the ground. Señor Gonzales Robinson was a good deal stared at, even in that motley assemblage. But he seemed to be instinctively recognized as a man who understood horses, and came to the bazaar for business, and when we had contrived, by dint of pushing and squeezing, to make our way to the front, the auctioneer greeted the señor with a friendly nod. Each time that the auctioneer's clerk called out a lot, one of the shirt-sleeved men in the arena, cracked his stock-whip, causing all the horses to rush to and fro like a flock of frightened sheep, and then the "overlanders," as I afterwards learnt these men were called, would walk calmly into the thick of the frightened throng, regardless of plunges or kicks, seize the horse by the mane to which the lot referred, and hold him firmly until the auctioneer's hammer had fallen. The sale lasted more than an hour, during which time Señor Robinson's experienced eye picked out the likeliest animals for his purpose, and he purchased five at about £11 a head. Prawle ventured to ask him why he didn't buy six horses, as that would only be one apiece. The señor replied that Captain Spanswick was already provided with a horse, and that he would not accompany our goods train, but would ride on ahead, and arrive at Bendigo before us, so that when we got there he would be able to give us the latest news concerning prices and the prospects of gold-digging. At length the sale came to an end, and I innocently thought that we had nothing more to do, but that the "overlanders" would secure for us the horses we had bought. But I presently learnt fron Señor Robinson that they would undertake nothing of the kind. Their connection with each horse terminated the moment it was sold, and buyers must go in and catch their horses for themselves, unles they chose to pay handsomely for the job. Accordingly, as soon as the sale was over, Señor Robinson, armed with his coil of rope and his heavy whip, entered the arena, followed by me and Prawle. I con-

fess that I felt no small degree of trepidation, and I could see by the expression of my comrade's red face that he too was not very comfortable. The horses had all collected together in a bunch at one end of the inclosed area, and seemed wilder then ever. I wondered how the señor could tell which horses he had bought among such a swaying, plunging crowd; but in this respect he possessed an unerring eye, which never made a mistake. He began operations by approaching the herd, and sounding a tremendous crack on his formidable whip. This caused the terrified animals to break asunder and separate. The experienced eye of the Mexican at once singled out one of his own purchases, he ran nimbly backwards for a short distance, then, raising his coil of rope, he discharged it with all his force at the horse's head. At one end of the coil was a slip-knot, and this slip-knot fell over the animal's neck, effectually preventing any further progress. Prawle and I immediately discovered that which we had failed to perceive before. The coil of rope was nothing more nor less than a lasso, and most skilfully was it used by Gonzales Robinson. For a few moments the poor animal struggled desperately, then his eyes began to start out of his head, then his knees trembled, and he seemed on the point of sinking to the earth. At this critical moment, when suffocation would shortly have ensued, the lasso-thrower cautiously slackened the tension of the slip-knot, and, aided by Prawle and myself, slipped a halter over the animal's head. As soon, however, as the wild, frightened creature felt the deadly pressure of the cord removed, all his strength seemed to come back; he began to rear and plunge and kick with the utmost fury, and it required all the united strength of Prawle and myself to drag him up to the rails where we fastened him securely, and then went off in search of a fresh victim. If a horse resisted very savagely, the señor, not content with the discipline of the lasso, lashed him mercilessly with his heavy whip. One of the animals, in order, I suppose, to escape the pressure of the lasso, threw himself down the moment after the cord had fallen on his neck, and lay on his side as if dead. "I'm afraid he is dead?" said I to the señor.

He smiled. "Dead? No. He is too much alive. Creep quietly up to him, and halter him."

We crept quietly up, and slipped the halter over his head. Now, as this was the fourth horse in whose capture we had assisted, Prawle and I began to feel like old experienced horse-tamers, and when Prawle said, gravely, "I shall sit on his head; a London cabman always sits on his horse's head under similar circumstances," I felt that I was listening to words of ripe wisdom. But, unfortunately, the señor, not

noticing what Prawle was doing, and only anxious to get his obstinate quadruped on his legs, suddenly delivered a stinging crack with his whip on the creature's hind quarters. Up leapt the astonished New South Waler, and away flew Prawle, head over heels, making a complete summerset in the air. He was not a bit hurt, for the area was ankle-deep in mire and manure, but he was bespattered with filth from head to foot, and was received with shouts of laughter by the circle of spectators, who were watching Señor Robinson's performances with as much curiosity as if they had been looking on at a bull-fight. Prawle was very good-tempered, he was not at all annoyed, but made a low bow to the company, at which there were fresh roars of laughter, and when he explained that he was trying to do things in the London style, they cried, "Bravo, Long-legs!"

About this time, just as Señor Gonzales Robinson, and Prawle, and I had done all the hard work, and were standing resting ourselves against the posts to which we had tied our restive property, the remainder of our company made their appearance. Captain Spanswick glanced at the horses with the air of a connoisseur, ran his hand down their legs to make sure there were no spavined bones, and examined their great broad hoofs, which had never yet been contracted by the artificial confinement of a blacksmith's shoe. Having gone through this ceremony, he said that he was quite convinced of their soundness.

"But they seem a little wild for our work, eh, señor?" said the captain.

"Wild? Yes, they are wild, as any Mexican mustang. But all horses were wild once. They must be tamed."

The little man spoke these last words in such a tone of suppressed vehemence, and with such a ferocious roll of the whites of his eyes, that none of us would have cared to laugh at him, though we all thought him the most comical creature to look at we had ever come across.

The next point to be considered was where the horses should be placed that night, as the provisions which we had purchased, the bags of sugar, the hams, the cheeses, the boxes of sardines, the cases of raspberry-syrup, and all the other good things with which we proposed to tickle the palates of the Bendigonians, would not be ready for our animals' backs until the next day. Señor Robinson, experienced among horses, but inexperienced in the villanies of Victorian colonists, advised that we should buy a sack of oats and some hay, take the horses out to our tent, and hobble them there for the night.

"Better put them in a livery-stable," said the captain.

"How much will that cost?" asked Lively Jemmy.

"Well, the charges just now are rather exorbitant. Fifteen shillings a head for the night."

We all exclaimed at this apparently monstrous charge.

"Fifteen shillings!" said Señor Robinson. "Then in a week your horses will cost as much for keep as they are worth."

"I'm quite aware of that," answered the captain, "the charge is most exorbitant, but it is equally high at every respectable livery-stable in town. By a respectable stable I mean one where you will find in the morning the horse you placed there overnight. Allow me to relate to you a little anecdote. The other day a friend of mine, a squatter, came down to town from Gipps Land. He had been up in the bush for two years, and was quite unused to Melbourne ways and Melbourne prices as they are at the present time. He grudged paying fifteen shillings for his horse's board and lodging, so at last put him up at a shabby little place in Prahran—on the Surrey side of the water, as you would call it, Mr. Prawle—where they agreed to take the horse in for seven-and-sixpence. The landlord said he would take all possible care of him, but declined to accept any responsibility. The horse was a valuable young bright bay, bred on my friend's station. During the night, my friend, who slept at the tavern in order to be near his horse, was awoke by a loud knocking at his bedroom door. 'If you please, sir,' said a female voice, 'they say the stable's on fire.' Up jumped the Gippslander, hurried on his coat and trowsers, and ran down to the yard. Sure enough there was something going on. Men were walking about, the stable-door was open, and a cloud of smoke was issuing forth. 'What's the matter?' 'Heap of straw in an empty stall took fire,' was the reply, 'lucifer-match dropped by somebody—stable full of smoke—cried fire!—let the horses go—there they are, out in the yard—all safe and sound.' The Gippslander at once went in search of his bright bay, groping about in the comparative darkness of a starlight night, found him standing in a corner looking contemplatively over a gate; led him back to the stable, which was by this time clear of smoke, and then lay down to finish his night's rest at the bottom of the stall, as an Asiatic groom does, being determined not to lose sight of his favourite again. In the morning he awoke, looked about him and began to rub his eyes. The horse in the stall was a bright bay certainly, but he was not his bay. He was a handsome horse to look at, but closer inspection showed that he was utterly unsound in his forelegs, and that, in short, he was only fit for the knacker's yard. My friend said nothing to the landlord at the time, but went to the police. He got very little satisfaction out of them, for just at the present time the thieves and

scoundrels have the whip-hand of the police altogether. The superintendent remarked that the job had been very neatly done, that it was more like an old-country trick than a colonial robbery. 'What is the name of the tavern?' he asked. 'The New Ring o' Bells, by Alexander Birnie.' 'Ah! then I'm not surprised; Mr. Birnie, otherwise Duncan Macduff, was a famous horse-coper in Glasgow years ago. But he is anxious to keep a respectable character now, so, if I were you, I should offer him an ounce of gold, and he'll get you your horse back again.'

"My friend went to the landlord, took him aside, and told him plainly that his horse had been stolen during the night, and a worthless brute substituted in its place.

"'Yer hor-rse stolen! Eh! that's a most extra-ordinary thing!'

"'Such extraordinary things have no doubt happened before in your experience, Mr. Duncan Macduff, late of Glasgow,' said the squatter drily.

"'Nae doot, nae doot,' said the landlord coolly, 'but what can I do in the matter?'

"'You can get my horse back again.'

"'I?' cried Mr. Birnie in astonishment.

"'Yes, you scoundrel,' cried my friend, losing all patience, and seizing the fellow by the collar. He then took a pistol from his pocket and pointed it at Mr. Birnie's head. 'Now, I'll tell you what it is,' he said, 'there's no law, no order, no police in this accursed town. I'm going to be my own lawgiver. Now, Mr. Birnie, if in a week from this time, I don't get my horse back, or his value, that is, forty pounds, I'll put this bullet through your head. If you get my horse back, safe and sound, you shall have an ounce of gold for your trouble.'

"'Twa can play at the shooting game,' quoth Mr. Birnie very calmly; 'however, I'll do what I can. Ye can let my collar go, man.'

"A few hours after, my friend recovered his horse. 'In the confusion of the fire,' said the person who brought it back, 'it had been taken away by mistake.'

"Now," proceeded Captain Spanswick, "I know the colony pretty well; you, señor, with all respect to you, do not know it. If we take these horses out to our tent, we go just to the most dangerous place for horse-thieves, namely, to the outskirts of the town; we shall have to keep watch all night, and we can't prevent the horses from straying."

"Hobbled horses won't stray far," answered the Mexican, "if you give them a feed of oats."

"Why not strike the tent," said Lively Jemmy, "and move a mile or two further out of town?"

"The horse-thieves abound for a circuit of at least ten miles," replied Captain Spanswick. "After that you may reckon yourselves pretty safe till you get near the diggings. And, remember, you will have to return into town to-morrow to load up the stores. But, gentlemen, if you're at all dissatisfied——" he said, hesitatingly, as he surveyed the company—

"Well, Captain Spanswick," said Lively Jemmy, "we're most of us poor men. Fifteen shillings is a great deal to me, though it may seem very little to you. I'm putting all my fortune into this speculation. You may be sure that I don't want to lose my horse, but I do want to save expense."

"Hear, hear," said Prawle.

"Put it to the vote," exclaimed Harvey.

"If the votes are evenly balanced, you allow me a casting vote?" said the captain.

"Certainly, certainly."

"Very well, gentlemen. The question before us, put briefly is: Livery-stable *versus* Open Air. Those who are in favour of Livery-stable will please say 'Ay!'"

Nobody responded 'Ay' except the captain himself, and his faithful ally, Tom Harvey.

"Those who are in favour of the Open Air will please say 'No.'"

Señor Gonzales Robinson, Prawle, Lively Jemmy, and myself voted with the "Noes," who were thus victorious.

"Gentlemen," said Captain Spanswick, without the least sign of ill-humour, "I cheerfully accept your decision. I will come and take my share in watching with you; and as none of you, excepting Señor Robinson, are provided with fire-arms, I will bring with me a carbine and a couple of Colt's revolvers. But you won't expect me to risk my cob. I shall leave him in town at my own expense."

"Shall we move the tent?" asked Jemmy Wallington.

"As you have decided to camp out for the night with the horses, I think you had better do so," answered the captain. "What say you, señor?"

"The further from the town, and from other tents, the better," replied the señor, looking, as he leaned against a post with his arms folded, like a compressed Hercules.

"Very well," said the captain, "then we may consider that question decided. The next point that arises is this:—how are we to decide the ownership of these horses among these five gentlemen?"

"Hadn't we better toss up?" said Lively Jemmy.

"Or ride a race, and see who wins?" said Prawle, winking at me.

"No, gentlemen, no," said the Mexican, gravely. "I advise no ownership till we reach the diggings, but let every one be responsible for the horse under his charge. I must find out which are the most vicious horses, and give the most vicious to the best men."

"Rather jolly, at that rate, to be a best man," observed Lively Jemmy.

"Young man," said the Mexican, "do you not understand? A fool can manage a quiet horse; it needs a wise man to manage a skittish horse. I see trouble," he said, darting a quick glance at the horses, "in the eyes of these fellows."

"In everything that refers to horses, you may make pretty sure that the señor is right," said Captain Spanswick. "You have been a rider from a pretty early age, eh, señor?"

"Since so high," answered the Mexican, gravely, as he measured off about sixteen inches on the handle of his whip.

Prawle laughed, and then hid his great red face behind my shoulder.

Soon afterwards our cavalcade started, each member of the party, Captain Spanswick excepted, leading a horse. They gave us scarcely any trouble, except that they were eager to nibble any tempting specimens of grass which grew under their feet, but the señor warned us not to make sure that their conduct would always be as good as it was at present.

"Have you never seen a cruel child, gentlemen?" he said, in his quaint, foreign English. "He will pull off the wings of a fly, and then say, 'See, I have tamed that fly!' These animals are weary with heat, with fasting, with the punishment of the lasso. Wait till they have been fed and rested; then their wings, like Samson's hair, will grow again, and some of them will give you trouble. I can judge their disposition pretty well already. That black horse which Mr. Harvey is leading is the quietest of all. Who will have the quietest horse?"

Pride prevented everybody from returning an answer.

"Understand me, gentlemen," he said, smiling for the first time through his sternness; "the quietest horse will not be so very quiet this time to-morrow. They are none of them accustomed to carry loads. Mr. Harvey, you had better keep the horse you have got."

"I'm agreeable," said Harvey.

"What shall you call him, Tom, eh?" asked Jemmy.

"I don't know," said Harvey.

"What do you say to 'Coalscuttle?'"

"Yes, Coalscuttle will do. Gee up, Coalscuttle!"

"Mr. Wallington," continued Señor Gonzales, "had better change with me, and take this brown mare."

"All right," said Jemmy.

"Call her Topsy, Jemmy," cried Prawle.

"Why Topsy?"

"Because she sent me flying topsy-turvy into the mud," answered Prawle.

We all laughed at Prawle's humble wit, and then the Mexican went on to say, "You, Mr. Prawle, and you, Mr. Scudamore, had better each keep what you have got."

"I shall call my white mare Lucy," said I, thinking of my sister on the other side of the world.

"Lucy!" cried Prawle; "how sentimental we're getting! And what am I to christen the yellow quadruped under my charge?"

"Won't Gamboge do for him?" said Captain Spanswick, laughing.

"Thank you, captain. Yes, Gamboge will do first-rate. Now we only want a name for the señor's chestnut."

"Names are of little consequence," said the señor; "still, if it pleases you, young gentlemen, he shall have a name. Let us call him by the name of the lake on the borders of which I was born—Titicaca."

"Good. Titicaca, my respected friend, allow me to salute you," said Prawle, stroking the animal's nose. The chestnut laid back his ears, and showed his teeth viciously.

"Have a care," said Señor Gonzales. "He can bite, and will bite, if he gets a chance. But if you bite, Señor Titicaca, I can bite back again, and perhaps my bite will be harder than yours."

The arrival of such a caravan caused quite an excitement among the inhabitants of the little cluster of tents. They came out, lounged about, looked at the horses' legs, and questioned us on the prospects of our expedition. Pug, the Greenwich man's dog, was a perfect nuisance. He barked till he was nearly out of breath; but at last, venturing too near Miss Lucy's heels, he received such a kick from my dear sister's namesake, that he ran away yelping on three legs, and molested us no more. It did not take long to strike and pack up the tent and our other movables. The pack was laid on Coalscuttle's back, as an experiment. He winced, trembled, and seemed greatly surprised at the unwonted pressure; but Señor Gonzales took him apart from the others, fondled his ears, addressed him in some musical foreign tongue, Mexican I suppose, whispered mysterious words in his ear, and, by degrees, reconciled him to the burden. Every moment the señor rose higher in our opinion. He appeared to possess the true genius of a horse-tamer.

We now travelled for two miles in a north-westerly direction, and at length camped in as secluded a spot as we could find, though all around

us the ground was scarred with the tracks of bullock-drays. The tent was soon pitched; there was a waterhole close at hand—for, in the spring-time of the year, water, even in arid Australia, is pretty plentiful everywhere,—and there was a prostrate log which provided us with a fire. Harvey and Wallington attended to the cooking department, Captain Spanswick and Prawle pitched the tent, Señor Gonzales and I put the hobbles on the horses, and gave them their provender. By the time we had accomplished all this work, the sun had set, darkness was coming on, and everybody was eager for tea and a jolly big beefsteak, which we had bought as we came out of town.

Before darkness came on entirely, we were divided, under Captain Spanswick's directions, into three watches. The first consisted of the captain and Harvey; the second of Prawle and Jemmy Wallington; the third of Señor Gonzales Robinson and myself. Each watch was to remain on duty for two hours, and to occupy itself in patrolling round and round the camp, challenging all visitors. The captain explained to us that we must be very cautious in the use of our firearms. "You must please to remember, gentlemen," he said, "that you are not in a barbarous territory, but in a British colony, under British laws. There are a great many scoundrels about just now, and the country is in a disturbed state, but that will not justify us in firing upon anybody unless our lives are in actual danger."

"Supposing," said Prawle, "a fellow comes and tries to take away a horse under my very nose, what am I to do?"

"You must seize and secure him."

"Suppose he is stronger than we are?"

"You must call up the rest of the party."

"If I may not fire, what is the use of this pistol?"

"To frighten him. Fire if you please, but take care to fire over his head."

"I shall not shoot," said the Mexican, in his deep voice, "unless I am obliged. But if I shoot at all I aim straight. I aim, gentlemen, at my enemy's heart."

The two earlier watches had little solitude to complain of. Wayfarers were constantly passing near the tent, and, seeing our fire, drew near, either to get a light for their pipes, or to beg a drink of tea, or to enjoy a chat and the grateful warmth of the burning log. Captain Spanswick warned us against being too free in entering into conversation. "Be civil to everybody, but encourage nobody," he said.

I must confess that nervousness prevented me from sleeping comfortably. I was perpetually starting up, fancying that there were threatening

voices round the tent, and expecting every moment to hear the report of a pistol-shot. I envied the weather-beaten Mexican, who lay stretched with his head upon the coil of his lasso, sleeping as placidly as an infant. But I observed that, probably from long habit of living among a lawless community, his right hand remained close to his pistol-belt, and I also noticed that when the second watch was over, and Prawle called him by name, he did not rise slowly, yawning, stretching, gaping, and blinking, as citizen-sleepers are wont to do, but started at once to his feet, standing as erect as a soldier, with all his wits about him.

"Now, young man," he said, addressing me as he handed me the carbine, and examined the caps on his revolver, "ours is the most important watch of all. 'Tis now the dead of the night. Let us keep our eyes open and our mouths shut while on duty."

In obedience to these commands I paced round and round the circuit which Captain Spanswick had marked out, and which contained—barring the provisions we had left behind in Melbourne—all that was valuable to us on Australian soil; namely, our tent, our steeds, and our sleeping comrades. At intervals of about five minutes I met Señor Gonzales Robinson looking intensely stiff and military, with his punchy figure drawn up to its full height of five feet two inches. On these occasions, when I would have been glad if he had said something, he merely uttered a sort of inarticulate grunt of satisfaction, as much as to say, "Everything is safe at present." The night was very dark, for the sky was overcast by a thick canopy of cloud, and the flickering light from our fire, while it illuminated the tent and the horses—three out of the five of which had lain down to sleep—plunged all objects beyond our circle in a profound obscurity. At first I felt, like Señor Gonzales, extremely military, made myself as tall as possible, and tried to fancy I was a grenadier keeping watch and ward before the gates of her Majesty the Queen at Windsor Castle, but I could not keep up the illusion for long, and when about three-fourths of the watch had been completed, I began to grow so tired and sleepy with this perpetual round, round, round, like a horse working a brickmaker's pug-mill, that I nearly dozed off as I paced mechanically along. At last I came to a dead halt, and was on the point of dropping asleep on my legs, when I was suddenly startled into wakefulness by meeting my comrade. To my astonishment he clutched me by the arm, and without saying a word, drew me towards the fire. I was rather alarmed, for I thought he had detected my sleepiness, and was about to administer some dreadful punishment in accordance with the regulations of his native country; but on looking at his face, I perceived that its ordinary tint of nut-

brown had faded into an ashy paleness, and that the expression of his countenance betokened alarm rather than anger; still he clutched my arm convulsively, and then spoke, in a hollow, tremulous voice, the following words:—

"Young man, I do not fear a living foe. If all the horse-stealers in Victoria came before me armed to the teeth, I would face them. I can die but once. But I do fear the spirits of the dead. Listen to me. Years ago, I fought for my native land, for Mexico, against the Americans, who came to ravage and pillage our country. We had lost several battles, and many men. My blood boiled, and I swore an oath that I would 'give no quarter to the next American I met in fair fight. Again a battle took place, and I found myself face to face with a young American officer. He strove to cut me down, and then aiming his revolver at me, wounded me in the thigh. I rushed upon him like a jaguar, seized his sword-arm as if in a vice, and wrested his revolver from him. He was entirely in my power, he begged and entreated for mercy. I would have granted it, in spite of the stinging pain of my wound, for he was a fair-faced beardless boy, but I remembered my oath; I pressed the muzzle of the revolver to his forehead, and in another moment all his beauty was disfigured for ever. Since then, at times, when troubled and anxious, his spirit has haunted me. *It is here to-night.* If you do not believe me, I will show it you."

Again he seized my arm, and led me away from the the fire out into the darkness. He pointed with a trembling finger, whispering the while with a hoarse voice in my ear, till I was nearly as frightened as he was. A white figure was certainly perceptible at about a hundred yards' distance, and after watching it attentively I saw it move. Now my fears were just the opposite to those of our worthy Mexican friend. I had a wholesome awe of Victorian desperadoes, but I had no belief in ghosts, and when I saw the figure move, I felt sure that it was some living creature. A bright idea struck me. "Perhaps," said I, "it is our white mare, Lucy."

"Yonder lies Lucy, asleep," answered Señor Gonzales. "No, no, it is *his* face; I can see the beseeching look, and the blood streaming down."

Again the figure moved. I could resist no longer, but raising the carbine to my shoulder, and remembering Captain Spanswick's injunction not to aim at the object, fired in the air. I was at that time very little accustomed to fire-arms, and the carbine, though a small piece, was a dreadful kicker. The effect of the recoil sent me flying backwards, and I had a pain in my shoulder all the following day. The noise of the report prevented me from hearing any other noise, but Señor Gonzales

declared that the figure disappeared with a deep groan. One thing was certain, it had disappeared. But the noise of the carbine-shot aroused our comrades from their slumbers, and one after another came out of the tent in a state of great excitement to know what was the matter.

"Do not say it was a ghost," whispered Señor Gonzales to me. I think he was beginning to grow ashamed of his superstitions.

"I don't know what made you shoot, Scudamore," said Captain Spanswick, as he perceived the smoke curling from the muzzle of the carbine, "but I have the satisfaction of knowing that you can't have killed anybody, because I took care to put nothing but powder in your weapon. But what's the matter, everything seems quiet enough?"

Before I could afford any explanation, Lively Jemmy exclaimed: "I say, look out, there's a fellow over there in a white jacket."

"Great Heaven," cried Señor Gonzales, "the spirit of the American has returned again!" And he fell on his knees in the attitude of prayer.

Prawle was the laziest of the sleepers, and came lounging out of the tent last of all.

"I say, Prawle, you have cat's eyes, you can see in the dark, what is that over yonder?"

Prawle gazed steadily for a minute without speaking, then went down on his hands and knees, and crawled swiftly towards the mysterious object. We felt proud of his bravery when he shouted, "I've got him, come and help me to hold him!"

We all rushed forward like one man, eager for the fray. The enemy uttered the most singular cries, exciting our curiosity to the utmost pitch. As soon as we came to close quarters, we found Prawle, with a glance of mischief in his twinkling eyes, embracing a poor little white calf, which had strayed away from its mother. The owner came in the morning and reclaimed it.

(*To be continued.*)

Velocipedes.

THE VELOCIPEDE OF THE DAY.

The Tricycle—(*continued*).

A RECENT number of the *Scientific American* contains the drawing of a tricycle, which has many advantages to recommend it (Fig. 9). It was designed by Mr. John Tremper, of Wilmington, in the United States. It has the driving-wheel in front, with the direct action of the

Fig. 9.—The Wilmington Tricycle.

reel pedals, but the wheel is placed much nearer to the rear wheels than any of the tricycles yet made. This gives the rider a more complete control over the motion and action of the machine, and enables it to turn corners with the safety and celerity of the two-wheeler. Its construction is thus described: "From the axle of the hind wheel rises a bow-shaped brace, to which is bolted one end of the reach, which consists of two parallel pieces of wood bolted together, and embracing between them an upright standard or pipe, terminating in a forked brace, in which the driving-wheel turns, and having directly over the wheel's rim, where the forked braces unite, a brake-shoe or pad. The weight on the driving-wheel and part of that of the rider are sustained by a spiral spring, as seen in the woodcut, which serves as a buffer in passing over irregularities of the ground. The steering-bar, which is a prolongation of the forked brace, passes up through the hollow standard, and is furnished with handles, as usual, at the top. The seat, or saddle, is sustained by two cast-steel springs, secured to the front of the reach by means of a cross strap, or block and bolt, so that it is easily adjusted further to the front or rear, as may be desired. The upright tube may also be adjusted in the reach to suit the length of legs or arms of the rider." Some of the points in this machine are well worth the careful consideration of the velocipede manufacturer. A leg-rest would improve it. Its good qualities would recommend it on fair roads; indeed the great, if not its only drawback, is the width of the hind wheels apart,

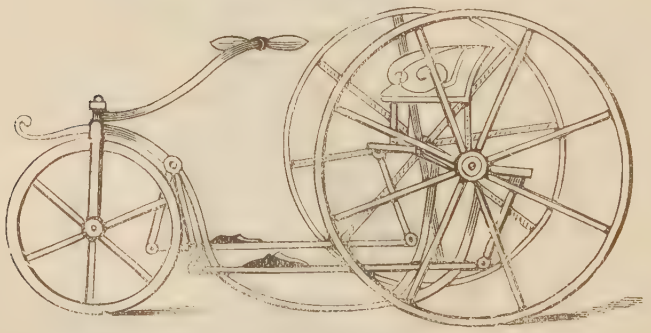


Fig. 10.—Lisle's Ladies' English Velocipede.

which would prevent the rider from picking his road with the ease he does on the bicycle.

Several modifications have been proposed, but none of the machines using the front wheel as a driving-wheel differ materialy in form or construction from those delineated.

The tricycle, when fitted with a seat instead of a saddle, became a favourite with the fair sex of Paris. The necessity of the case suggested many modifications in the construction of the machine. The front wheel is only used for steering purposes, and as a support to the reach. The power is supplied by treadles and levers, acting on cranks in the axle of the rear wheels. The seat is a cushion chair of horsehair and wicker-work, fixed between the hind wheels, and supported by the reach and bearings on the axles. Mr. Lisle's "Ladies' English Velocipede" (Fig. 10) furnishes a good pattern of this elegant vehicle.

The downward curve of the reach in this pattern does away with the objection to the Parisian tricycle (Fig. 11), in which the reach is either

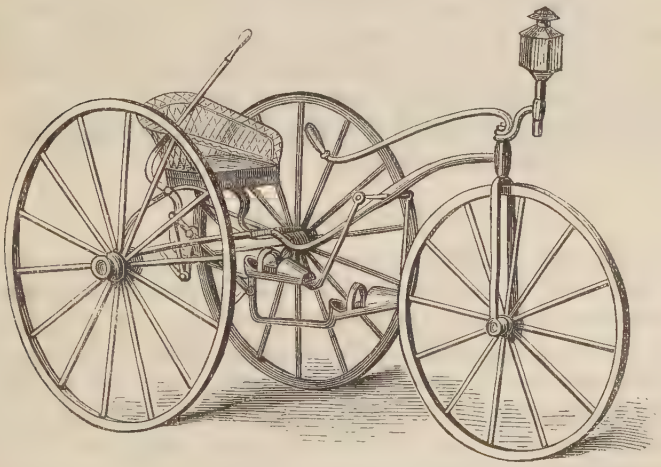


Fig. 11.—Ladies' Parisian Tricycle.

straight and suggestive of an ungraceful attitude, or curved sideways, which is emblematic of weakness. The pedals are furnished with slipper-shaped rests for the feet, and are so formed as to enable the rider to disengage her foot instantly. The motive power is similar to that of weaving, and is analogous to walking. There is no pressure of the foot, and the leg is fully extended without any cramping effort. Some of the larger and more powerful velocipedes of this principle (see Fig. 11) are fitted with side levers, which act on the cranked axle and materially

increase the speed, and at the same time serve, if necessary, as a brake, by the rider pressing against it. The-steering handle is fixed like that of an ordinary Bath chair.

Since the recent revival of the velocipede movement there have been many suggestive improvements, but there are none which increase the power. A favourite notion is the use of direct foot motion on the cranked knee or toggle joint; and the other the use of a fixed straight lever acting in the same manner by the weight of the body. I have seen three-wheeled velocipedes with the two driving-wheels in front, attached to a triangular frame; but neither the rider nor the lookers-on pronounced it a success. There was some difficulty in steering it, and it had an inherent disposition to travel backwards. Except for ladies, the treadle machines offer no advantages. They afford healthful exercise to the fair sex, and, on comparatively level ground, they would doubtless be found an agreeable adjunct to a country life.

In many fashionable spas, Bath chairs, furnished with a handle and multiplying-wheels, are frequently seen, in which invalids can move themselves about. They are an admirable contrivance for exercise, but their speed is that of the tortoise, not of the hare.

The "Rantoone" velocipede of Messrs. Ransome is a modification of a tricycle, with levers and treadles.

"Four-wheelers."

No description of velocipedes would be perfect without some allusion to the favourite "four-wheeler" of the past generation of mechanics. The idea of the four-wheeler is perfect security, space for a companion, and an imposing appearance. The drawbacks are want of control, steering-brakes, loss of power, and expense. There are numberless varieties and patterns of these machines, all of which have their admirers. Amongst the best, if not the very best, is one manufactured by Mr. Andrews, of Dublin, the construction of which will be best understood by reference to Figs. 12 and 13.

The frame of this velocipede is made of the best inch-square iron, seven feet long between perpendiculars. The treadles are made of the best ash, $1\frac{1}{2}$ inch by $1\frac{1}{4}$ inch, 6 feet 6 inches long. The wheels should be made as the best velocipede wheels are made, of elm stocks, 4 inches by 5 inches; hickory spokes, which should not exceed $\frac{7}{8}$ inch by $\frac{3}{4}$ inch, tapering to $\frac{3}{4}$ inch to $\frac{1}{2}$ inch. The felloes are made of best ash, bent in one piece, so that they only require one joining; light steel tires. Mr. Andrews makes his wheels 3 feet 4 inches high; but if similar wheels are made for a bicycle, they should not exceed 32 or 34 inches high.

The fore wheels move freely on an axle, which is fixed by a pivot to the reach or frame, and a steering-handle is likewise attached to the axle by a lever brace. The reach is curved upwards, to support a cross bar on which the treadles are suspended : it is forked under the seat, and lies over the cranked axle on brass bearings. The seat should be made as light as possible, of some wicker or cane work, and may be stuffed with hair.

This form of velocipede admits of hand-levers being fitted, as shown by the dotted lines, Fig. 12. The other dotted lines show the positions

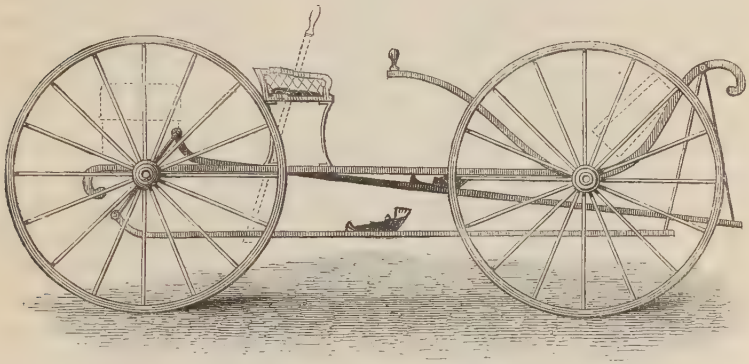


Fig. 12.—The Dublin Velocipede.

for a valise, box, or portmanteau at the back of the seat or above the front axle.

Mr. Sawyer, of Dover, is another well-known maker of four-wheelers. One of the most recent suggestions for the improvement of this class

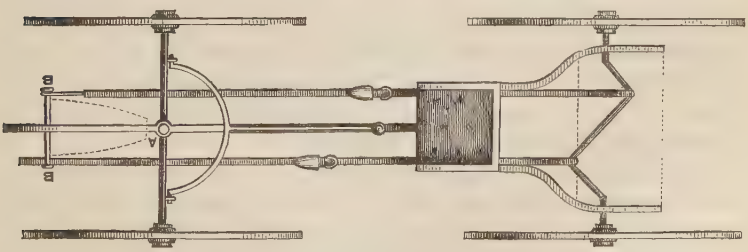


Fig. 13.—The Dublin Four-wheeler.

of velocipedes is to gain additional power by dispensing with the treadles and permit the feet to work directly on knee-joints in the axle of the

front wheels. This plan does not overcome the objections that have been raised to the four-wheelers in general.

The Art of Velocipede Management.

As in most other accomplishments, practice alone can make a skilful rider of velocipedes. The tyro can, however, profit by the experience of others, and I give a few rules for his guidance, as well as directions for his practice. The first point is to gain confidence in, and familiarity with, his wheel horse. If he has had one made according to the directions here given, he will know its parts and proportions intimately. If he has but recently purchased one, he should walk by its side, guiding it by the handle until he knows its movements thoroughly. He will see that it obeys, almost like a "thing of life," the slightest movement of the handle, and follows the driving-wheel in all its tortuous movements.

The second step of progress is to gain and keep the balance when astride on the saddle. This is apparently a very difficult feat to accomplish, but really it is not so. After sitting for a few minutes in the velocipede, with the toes touching the ground, the vehicle may be placed on a slight incline, so that it may run down of its own accord. The handle must be gripped firmly and steadily, and the feet just lifted from the ground. If there is a disposition to swerve either to the right or left, in consequence of the inclination of the body disturbing the equilibrium, a slight alteration of the pressure on the handle will restore the lost balance.

In the riding-schools it is usual for the assistant to steady the velocipede in the earlier lessons; but, like learning to swim on corks, it is far better to dispense with this extraneous aid, so that the rider may study the action of the machine himself. He will find the sensation peculiar at first, but a slight practice will habituate him to it. At first he will wish the handles were firmer, for each nervous twist that he gives it as the machine moves is calculated either to upset his balance or to turn the vehicle out of a straight line.

A few runs down an incline will pave the way for the first real lesson on self-propulsion. At first, it will be better to lift each leg alternately, so that they may follow the movement of the pedal without exerting any force. This will habituate the knees and feet to the movement. It is during this practice that the arm of a friend or the ready hand of a skilled assistant is valuable, as there is always a disposition to press too hardly on the pedal. It does not require the strength of an elephant to

turn the driving-wheel, even on the roughest road; and in these preliminary trials it is quite unnecessary.

The engraving (Fig. 14) "The Mount" shows the position of starting. Observe the position of the pedal, on which the left leg is resting. It

Fig. 14.—The Mount.

is placed in such a position that the mere weight of the rider will cause the machine to move. Ere he has brought the foot down, his right leg will find a resting-place on the corresponding pedal, and by the exercise of a *little* downward pressure alternately as each pedal turns, progress will be made, as shown in Fig. 15 and Fig. 16.

It is very important that the pedals should be placed at the angle indicated, as it gives the necessary impetus to the start. Should there be any danger of falling, take the foot off the pedals on the side and rest it on the ground, and commence afresh. It is by no means uncommon for the learner to be able to run a distance of fifty or sixty yards after a few hours' practice. To alight it is only necessary to apply the brake by turning the handle. To slacken the speed, release the feet from the pedals and place them simultaneously on the ground.

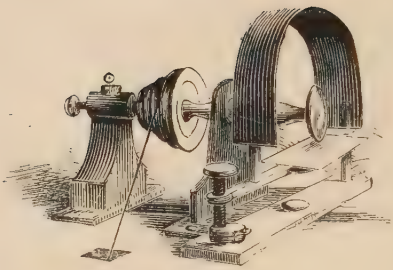
In all the earlier essays choose some unfrequented road for practice, and avoid as far as possible a crowded thoroughfare.

Fig. 15.—The Start. Just off.

Practise at first down hill; the use of the brake will at all times prevent excessive speed.

Beware of advancing vehicles and abrupt crossing of roads. Do not ride on the foot-paths!

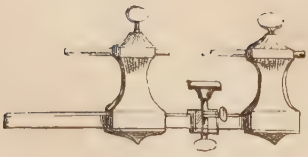
(*To be continued.*)



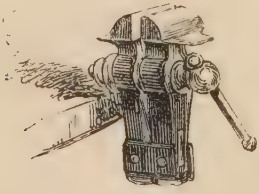
EDGING LATHE.

POST.

TURNING THE LENSES.



PAIR OF TURNS.



VICE.

THE OPTICIAN.

Trades connected with Science and Art.

By THOMAS ARCHER.

OPTICAL INSTRUMENTS.

IN speaking of the trade of the optician it is difficult to avoid commencing with some remarks on the science of optics; but this would lead us to such a length, that we should find ourselves altogether beyond the intention of this series. In fact, even the elements of optical science, if rightly explained, would form a small volume of itself, and we must therefore confine the present remarks to a few preliminary observations, which may serve to show to what purpose some of the principal instruments made by the optician are best adapted.

It is perhaps known to most of our readers that rays of light are called incident or reflected—that is, that they fall on the surface of the object at which we look, and again are sent off from it. Light always moves in straight lines, so that in this respect it follows the general law of reflected or rebounding bodies, which return in the same line as they are projected against another and larger body; and following this law, in optics the angle of reflection is always equal to the angle of incidence—that is to say, rays falling obliquely on any object are reflected in the opposite direction at an angle equal to that by which they reach the object. This may easily be illustrated by two persons standing at such an angle before a looking-glass that they may see the reflection of each other, but not of themselves. Another axiom in optics is, that we see everything in the direction of that line in which the rays approach us last, so that when we see through any medium like glass, what is called refraction has an influence—"refraction" being the turning or deflection of the oblique rays from their former course after they enter the medium. This is remarkably observable in objects seen through water, and even in some

peculiar conditions of the atmosphere, like the mirage or mist that occasionally so distorts the view of objects that a desert may appear like a marshland by the reflection of distant water. The effect of the passage of rays through a medium is that when they fall directly upon it in a straight line they do not deflect, but that when they fall obliquely the angle of reflection is lessened in proportion to the density of the medium. A ray passing from a denser to a rarer medium, however, increases the angle of reflection, or, in other words, goes farther from instead of coming nearer to the perpendicular or straight line.

The work of the optician, then, is with the mediums through which we regard distant or minute objects, or assist the eye in its powers of observation. These are generally in the form of glass lenses—that is to say of portions of glass ground into such a form as to collect or disperse rays of light, which pass through them, or of convex or concave mirrors, which, in conjunction with these lenses, enable us to perceive objects that would otherwise be too distant or too delicate for the organ of vision, which is designed for the perception of the objects by which we are more immediately surrounded, and which have a nearer relation to us.

Lenses are *plano-convex*, with one side flat and the other convex, or forming a segment of a circle outwards; *plano-concave*, or with one side flat and the other concave, or forming the segment of a circle inwards; *double convex*, with both sides convex; double concave, with both sides hollow—or with one side concave and the other convex, like a watch-glass, a shape which is known as a *meniscus*, from the Greek word, which means a little moon or new moon.

It would be interesting to give some further illustration of the operation of these lenses and of concave and convex mirrors, either separately or in various conjunctions, but this would require an outline of the elements of optics, and we can only refer the young inquirer to a study of that most beautiful and entertaining science. The optician, however, should be acquainted with the science, without a knowledge of which he can never become an intelligent workman, and he should also have studied the anatomy of the eye and its relation to the brain and the nerves of the head and face; the eye itself consisting of an exquisite lens, known as the crystalline humour; refracting media called the vitreous and aqueous humours, a mirror by which the sense of vision is imparted to the brain, and a wonderful and delicate curtain, which, by its expansion and contraction, regulates the quantity of light admitted through the pupil to the sensitive lens—a curtain beautiful beyond all telling, sometimes blue, sometimes grey, brown, black, or of various mingled hues.

Spectacles are the commonest form of optical instruments, and are intended to assist any defects in or injury to the eyes arising from accident or old age. In some cases the lens of the eye is either too flat or too convex, while in others the refracting portions become too dense, and are not sufficiently transparent to allow all the light that enters the eye to pass to the retina. Spectacles, then, have either concave or convex lenses, so that the rays of light may be made to converge or to diverge on their entrance into the eye. The same principle is adopted in the telescope, where the convex glass is always at the further end of the tube nearest the object to be viewed, and the sliding tube adjusts the sight to the peculiar concavity or convexity of the eye of the person using the instrument. The microscope is composed also of lenses, so operating as to bring the angle of vision into relation to any minute object to which the eye is directed, and every other optical instrument depends on the combination of lenses, mirrors, or refracting mediums.

Of course the accuracy of optical instruments depends so much on the lenses, that the utmost care is taken even in the selection of the glass of which the best are made. A single melting of the material for optical glass made at one of our largest works lasts five days, during which time the "metal" is constantly worked, in order to clear it and free it from impurities. The whole mass is then allowed to cool, and a large lump of glass is drawn out, varying in weight from 6 cwt. to 12 cwt. This mass is polished, and sawn in pieces of pure glass, varying in weight according to the size of the lenses required, some of them, for lighthouse and other purposes, weighing several hundred pounds. These pieces are again heated in a kiln, where they are moulded into the shape of discs of the required size and thickness. The principal points to be attained in this stage of the manufacture (which belongs to the glass-worker and not to the optician) are complete freedom from veins, absolute homogeneity of the whole mass, and perfect annealing, so that there may be no polarization of the rays of light; that is, no division of the various rays in

Lenses before turning.

Lenses after turning.

consequence of any crystalline character in the lens. Rough discs only are generally manufactured by the glass-worker, and they have afterwards to be ground by the optician, who reduces them to the proper curve by means of revolving wheels—on which stone, sand, or emery

is used—and afterwards polishes them on wheels covered with leather, to which putty, powder, rouge, or some other soft powder is applied.

It will thus be seen that the operations for producing the lenses are simple enough and have to be performed by manual labour in order to bring them to perfection; the edging-lathe enabling the workman to fit them to the instrument.

Convex Tool.

Concave Tool.

There are two kinds of telescopes, the *dioptric* or *refracting* telescopes, which are constructed with glass lenses only; and the *catoptric* or *reflecting* telescopes, which have a reflecting speculum at one extremity of the tube in order to form an image at its focus; the image so formed being viewed by the eye through intermediate reflectors. In some reflecting telescopes the rays reflected from the speculum converge and fall upon a small mirror so placed as to make an angle of 45 degrees with the axis of the telescope, and after this second reflection they unite and form an image which is seen through an eye-piece fixed in the side of the tube opposite the mirror; that is, near the open end of the tube. This is called the Newtonian telescope from its having been invented by Sir Isaac Newton; but the Herschel telescope differed from it in having no small mirror. The surface of the great speculum which was four feet in diameter was placed a little obliquely, so that the image formed by reflection from it, fell near the lower side of the tube at its open end; at this place there was a sliding apparatus with a tube containing the eye-glasses, and the observer stood at the open end of the tube with his back to the object, and looked directly towards the centre of the speculum. The speculum of Lord Rosse's telescope was six feet in diameter, and the instrument itself 56 feet in length; and there have been others of equal size. These are used for astronomical observations, while the refracting telescopes, or such as that originally invented by Galileo, are more fitted for opera-glasses, that is to say glasses for viewing objects within a comparatively limited space. These consist of one concave and one convex lens—the distance between them being equal to the difference between the focal lengths of the two lenses. A simple telescope is also formed by two convex lenses at a distance from each other equal to the sum of their focal lengths.

The microscope is an instrument for seeing minute objects not visible to the eye without the use of a small lens, and the lenses are powerful in proportion to their minuteness. The best microscopic lenses, then, are the smallest possible globules of glass, and they have frequently been made by scientific men, by melting the end of a fine rod of glass in a clear flame and taking the smallest possible drop of the glass for a lens. When the magnifying power is very great, it requires the object to be placed at the proper distance from it with such precision that the glass cannot be held by the hand with sufficient steadiness; it therefore has to be mounted in a frame having a rack or screw to move it to or from a sort of frame or stage which holds the object. The lens is called the microscope, but in order to make the instrument more perfect, other lenses and mirrors are used to collect the rays of light and reflect them upon the object. The compound microscope has two lenses, one of which receives the rays of light from the object, brings them to new foci and forms a fresh image of the thing to be seen, which image is received by the other lens and magnified, just as the lens of the simple microscope magnifies the image itself. This is sometimes repeated by several lenses, and by such means objects of the minutest description may easily be studied. The solar microscope is a conical tube fixed to a frame of wood, and screwed to a closed window-shutter at an aperture made in the shutter for the purpose. The sides of the room are often darkened with black cloth, and all light must be excluded. Outside the window is a square piece of looking-glass fixed on a hinge, and made to turn in such a way that the rays of the sun falling on it are reflected into the tube. These rays are made to converge on the object to be examined; and from thence after refraction through the lenses and glasses the image of the object is thrown on to a screen. The Oxyhydrogen microscope to be seen at the Polytechnic Institution and elsewhere is made on a similar principle.

One of the best-known optical toys is the Kaleidoscope—an instrument invented by Sir David Brewster fifty-two years ago. It consists of a tube, at the further end of which are placed two mirrors of what is called a trapezoidal form, that is, having one end wider than the other. These mirrors touch each other at the wider ends, near which the objects to be viewed are placed. The eye of the spectator should be at the opposite end of the tube, a little above the lines where the mirrors touch, and the effect is produced by the reflections from the two surfaces, which seem to multiply the objects and cause them to assume regular and beautiful forms. By applying the principle of the Kaleidoscope, the images of trees, flowers, and even moving objects may be multiplied.

The angle at which the mirrors are placed may be altered so that the images may be altered, or the multiplied images may be projected on to a screen, so that a number of persons may see them at the same time. A later improvement is that which is called the polycentral Kaleidoscopes, where three or four mirrors are so placed as to form a hollow prism with the reflecting surfaces inward.

The Camera Obscura, which has probably been seen by most of our readers, is generally formed by a room with a conical roof having an opening at the top. Above this opening is a revolving mirror, sloping at an angle of about 45 degrees, so that the pencils or accumulated rays of light are reflected downwards. A convex lens causes these rays to converge upon a curved surface of plaster of Paris, and as the mirror revolves, all the features of the landscape are thrown upon this white disc. Portable camera obscuras are often made by placing the mirror and lens in a sliding case at the top of a pyramidal box, the image being received on white paper laid at the bottom, while apertures at one side of the box allow the image to be seen, and admit the hand of the spectator who wishes to draw upon the paper.

It will thus be seen that the apparent magnitude of the things at which we look is measured by the angle at which they are perceived by the eye, and that all optical instruments are intended so to alter this angle at which light is reflected as to make minute or distant objects perceptible. It is the same with the very simplest instruments, such as spectacles, which are used to supply a deficiency in the eyes of those who wear them. When we look at things through a perfectly flat glass, the rays of light passing through it from the object we are examining are parallel, and the object is neither enlarged nor diminished —appears neither nearer nor farther off; but if the glass is convex, the rays of light are directed from the circumference towards the centre in an angle proportionate to the convexity of the glass, and meet in a point at a greater or lesser distance from the glass, as it is more or less convex. This point, where the rays meet, is called the focus; and this focus is nearer or further off, according to the convexity of the glass. The more the glass approaches to a globular figure, the greater its magnifying power. People's different length of sight depends on the same principle, and arises from a greater or less convexity of the cornea and crystalline humour of the eye; the rounder these are the nearer will be the focus, or the point where the rays of light meet, and the nearer must an object be brought in order that it may be reflected on the retina. Short-sighted people have more roundness of the eye than others; while the eyes of many old people become flattened, and the

focus is consequently thrown to a greater distance from the retina. The latter, therefore, require a convex glass, to shorten the focus of the rays, and the former a concave glass, to scatter the rays and prevent their coming to a focus too soon.

You will now understand why old people often hold a book or a newspaper at some distance in order to read it: while short-sighted people have to bring it close to their eyes. Long-sighted people, whose eyes are flatter, see objects at a greater distance; while short-sighted people, whose eyes are convex, see minuter objects, which appear much larger to them, in consequence of their having to bring them nearer to the eye.

Hammer.

Hammer.

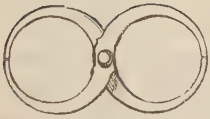
Saw.

Shank.

Screwdriver.

File.

Tweezers.



Callipers.

Single Callipers.

Drills.

Putty Powder.

Pliers.

The cases or tubes of optical instruments are generally formed of brass, which is an alloy of copper and zinc used from the very earliest times for forming all kinds of articles for useful and ornamental purposes. The ease with which it may be cast and turned in a lathe renders it peculiarly suitable for various sorts of instruments and the smaller parts of machinery; and the manufacture of the tubes of telescopes, the slides and frames and screws of microscopes, and various other portions of optical instruments, may be said to be part of the trades of the brazier and brassfounder, and of the metal turner.* In the fitting of the various

* *See* "Book of Trades, and the Tools used in them." Routledge & Sons.

parts, however, much skill is required, and the use of the post for fixing the rims, the drills for making screw-holes, files and saws for finishing and fitting accurately, and callipers for measurement, must necessarily be learnt.

Indeed, it may be said that an acquaintance with the business of the brass foundry and the wood and metal turner's shops is desirable, if not absolutely necessary, for the optician; for the tubes of some of the commoner instruments are formed of light wood covered with leather or shagreen, and the eye-pieces are frequently of bone, hard wood, or ivory. One of the most beautiful adaptations to the cases or tubes of optical instruments has been that of aluminium, which from its lightness and durability is admirably suited to the purpose. This metal, which is too expensive to be used except for instruments of good quality, is of a bluish-white colour, and with a lustre inferior to that of silver. Its specific gravity, however, is only two and a half times heavier than water; while zinc is seven times, silver ten and a half times, and gold more than nineteen times heavier than water.

Far Away in the Frozen Seas;

OR,

A STORY OF A WHALING EXPEDITION.

CHAPTER VII.

WINTER TROUBLES AND JOYS.

IT was now past the middle of October, and the long, dark six months' night of winter was fast approaching, with sure and stealthy tread. By the beginning of November the sun had ceased to appear above the horizon, and seemed almost to remain stationary upon it. Yet the daylight was often peculiarly beautiful. Sometimes everything would lie in a faint rosy haze, which deepened gradually towards the horizon, from rose into violet, and from violet into brilliant purple.

When the moon rose, she looked at first like some huge bonfire; but as she climbed higher by degrees, she threw a soft radiance over the whole scene, and tipped the gleaming masses of ice with silver. The stars no longer merely sparkled and twinkled, but beamed with a steady light, as if they were holes bored in the deep blue vault of heaven, through which its glory shone.

Dark winter crept nearer and nearer, and when November drew to a close, the sun never rose at all, though a bright red arch across the sky would mark his presence, and the short day only consisted of a few brief hours of dim twilight, scarcely strong enough even at noon to see to read a book by it.

Notwithstanding all the pains bestowed in the preparation of winter quarters, the terrible cold found its way through doors and walls. In

spite of the two stoves kept constantly heated in the hold, the very bedclothes froze to the men's feet, and they frequently found ice on their pillows in the morning where the breath from their mouths had congealed.

Dwellers in warmer latitudes can scarcely form any conception of the Arctic cold. The tanks of water became solid, the bungs in the casks were immovable, and if any one put down a glass of water out of his hand, he might expect to find it all one lump of ice five minutes afterwards. No water now was to be had except by breaking off chips of the frozen mass and putting them to melt in tin pots on the stove. The moment a door-hanging was lifted, a rush of steam like smoke would issue from the hold, and in a twinkling be changed to snow. Clouds of purplish-red vapour were always rising from the stoves, and the human breath resembled the smoke from a newly-discharged pistol.

Everything eatable in the ship and in the provision stores was stiff, more or less, and some experience was really necessary before one could quite make out what the things actually were under their new forms. Dried apples, for instance, all froze together into angular lumps. Dried peaches, too, it was utterly impossible to remove from the boxes, or to get the boxes away from them. After many unsuccessful attempts, it was found that the only way to get any good out of them was to take a heavy axe and chop up the whole concern, and then bring the pieces into the cabin and let them thaw.

Preserved cabbage looked exactly like layers of talc. The leaves could only be loosened, and that very imperfectly, by a sharp crowbar. Raw sugar was hardly recognizable under its new form: it looked like a mixture of cork-cuttings and caoutchouc. A sharp saw had to be employed to get it out of the barrel—nothing else would effect its removal. Butter and lard were more manageable, and could be cut with a good chisel and hammer. The surface of both seemed covered with brittle shells. Meal was not much changed, nor treacle; that, at any rate, could always be scooped up with an iron spoon or cut off with a knife.

Pork and beef had stiffened to a species of marble. Pickaxes and handspikes had to be used before any impression could be made, as only mere chips could be got off with a common hatchet. A cask of lamp-oil stood like a pillar of yellow sandstone, after the staves round it had been removed, and might have been used unhesitatingly as a roller for smoothing down a gravel-walk.

Ices were certainly not wanted at dessert, but they were always on

the table ; for any sort of preserved fruit, with a little butter and hot water, sufficed to make them. These were served up on a stick of ice which had been first used to stir them round, and then as a fork to lift them up. This stick was so strong that you might have felled an ox with it. The hardest part of the business was by no means over when the fruit-ice was on the plate ready to be eaten ; for it needed time and strength to make any impression on it with a knife, and no small amount of skill to get it up with a spoon and safely down the throat without sticking fast to the tongue on its passage. A sailor was one day tempted by the crystal transparency of a little round lump he saw glittering before him, and put it into his mouth to break it with his teeth. But the poor fellow soon found out his mistake ; for one piece froze fast to his tongue and two others to his lips, and he had to tear the skin away with them before he could get them off.

Happily Captain Becker had taken care there should be no lack of warm suitable clothing. All the men on board wore cotton socks under strong ribbed woollen stockings that came up to their knees, and over these waterproof Esquimaux boots with a sock of dogskin, the fur side turned inwards, the legs made of dressed seal-skin, and the soles so firmly fastened on to the outside that the edge stood up and made a sort of hollow dish, which kept the foot off the ground and made the boot water-tight. At the top of the boot there was a border of dogskin, and clean straw inside on the sole to retain the heat. The men also had on coarse woollen drawers under their trousers, and their bodies were protected by a short jacket made of sealskin and lined with reindeer-skin, with hoods to draw over the head ; while the head itself was encircled with a sort of turban made of wolf-skin, which left the top of the head bare, but shielded brow and ears completely. This was found to answer much better than fur caps, which were always soaked inside with perspiration ; and this turned to ice the moment they were off the head. If it was very cold, the hood could be pulled up ; and in still colder weather, and especially if windy also, they had an elastic silk nightcap sewed to a mask of wolf-skin, which completely enveloped head and face.

This was their ordinary costume, unless it was either unusually warm or cold. In the former case, the reindeer trousers were exchanged for cloth ones ; and in the latter an additional piece of thick woollen over-stockings was worn, which almost came up to the hips ; and round the hips a long scarf, to keep out the cold in walking and to prevent it getting in at the pocket-holes.

Such warm clothing was indeed absolutely necessary for the crew, especially during their regular daily walk, or when employed in any occupation that obliged them to be in the open air. For the first few minutes after leaving the cabin, they were forced to be careful not to open their mouths ; but, though they breathed as little as possible, and only through their nostrils, before long a soft white covering, like hoar-frost, would lie on eyebrows and eyelids, beard, whiskers, and moustaches, and from the bottom of the beard long icicles would be seen hanging. If some unlucky wight thoughtlessly exposed his tongue, it stuck to the hoar frost immediately, and froze so firmly that he could not get it free again without the aid of his hands. In truth, speaking was almost out of the question ; for often enough the freezing of the beard stuck the jaws fast together, and opening the mouth was not practicable. Sometimes a single moment was critical, for more than once even the eyelids were sealed with the stiffening power of the frost.

However, it was found that sharp, vigorous exercise not only made the cold bearable, but if the temperature was not unusually low, they could even walk themselves into a perspiration, so long as they kept from going against the wind. But the instant they turned the opposite way, and the wind blew in their faces, it was quite another matter. The biting blast seemed to pierce through all their clothing, and chilled the very marrow in their bones. A clasp-knife that some of them had in their pockets, which only a second before had felt uncomfortably hot, became suddenly cold as ice, and yet seemed to scorch them like fire ; and whoever had a gun with him, felt as if the metal part of it were gradually turning to boiling water, and beginning to scald his hands, through his thick woollen gloves, so that if he did not wish to lose his fingers altogether, he had to hasten back to the ship with all speed.

This was Robert's first experience of extreme cold, and he could not get over his astonishment at discovering that it produced exactly the same effects as extreme heat. A piece of cold steel felt, when touched with the bare hand, just like a piece of red-hot steel or iron, and the same results followed ; for the touch tore off the skin in both cases.

Robert had suffered considerably when the first severe weather set in ; but he had steeled himself to endurance, and by degrees got accustomed to it. He rose, like the rest of the crew, at six or seven every morning, always drinking a glass of cold water before getting out of bed, and then washed himself all over with a sort of slush of half-melted snow, and rubbed himself down with a coarse towel. Ablutions ended, he dressed as quickly as possible, and hurried up on deck. The keen

air almost took away his breath, and generally gave him a fit of coughing; but it made the temperature of the cabin feel all the more grateful when he went down again, though the thermometer in it stood at zero. Hot coffee and Indian-meal cakes, or whatever else there might be for breakfast, were dispatched with a good appetite; and then followed another walk on deck, till the piercing cold would once more drive him below.

At half-past ten, regularly every morning, the officers and part of the crew went ashore to take exercise for health's sake. They had generally first a game at football, till their legs ached; next came a slide on the ice, till they could slide no longer; and then they all shouldered their guns, and started off for a hunting excursion. At two they returned to dinner, and afterwards each man busied himself as best he could for the rest of the day, till weariness made them all seek their pillows, and try and wear away the long night in sweet slumbers.

To Robert there was something deeply impressive, and almost eerie, in the loneliness and silence that had reigned all around since winter began. Everything living seemed in a death-sleep that could know no waking. For many long months nothing ever came in sight, save an occasional polar fox or a seal. The thousand varieties of creature-life that had animated the region during the short polar summer had disappeared. All the duck species of birds were now quacking about the caves and creeks and streams of the milder southern shores. The gulls had taken wing for the open sea. The plungeon and penguin had taken up their abode on the northern coast of America. The croaking raven, even the black winter bird, found almost everywhere, had flown to the inland solitudes further south. In short, there was not a gleam of life to irradiate the sunless night; not a sound broke the stillness; not the least trace, nor faintest sign of existence, was to be found anywhere.

Hans had the greatest trouble to keep his dogs in food, and all he could ever get for them was the scantiest supply of seal's flesh.

Winter passed slowly away, and, at last, on the 21st of January, a gleam of returning light shone at noon, just a faint yellowish-orange tint in the southern horizon. It was not much, but how joyfully it was hailed by every heart on board! It gave promise that the long night would soon be over, and the assurance had a wonderful effect on the spirits of the men. They had been getting gloomy and downhearted, and discontented, and, though every precautionary measure imaginable had been adopted, symptoms of scurvy had appeared among the crew, and the disease had only been kept under with the utmost difficulty.

But in spite of everything, Robert's courage never flagged. He was

always merry, and tried to keep every one merry and hopeful about him. He was constantly getting up little theatricals, charades, and all sorts of entertainments, and was just the life and soul of them all. Captain Becker could not help expressing his admiration for his conduct; but Robert shook his head, and said, smiling,—

"I deserve no praise, captain. It is for *my father* that we are all enduring so much; and surely I ought to be the first to set the others a good example. Even if they all broke down, I dare not."

The 12th of February was the coldest day they had yet experienced. The thermometer stood at seventy-five degrees below zero, a degree sufficient to solidify chloric ether. The air seemed to sting the lungs as they inhaled it, and every man kept his lips firmly closed. But this added severity was cheerfully and even thankfully borne, for the light became longer and brighter each day, and filled their hearts with joyful hope of coming deliverance. All gloom disappeared from the faces of the crew, and health began to return to those who were sick. They were able to do without lamps in the cabin by the 17th of April, contenting themselves with daylight, like the rest of the world.

Spring had now fairly set in, and a day or two afterwards a solitary snow-ortolan appeared as the harbinger of approaching summer. Other birds soon followed. The petrels began again to screech over the loosening ice, and dart down on the ship to devour the cakes that had been set to entrap them. But it was not till the second week in May that any universal return of the feathered tribes began. From the 16th of that month, onward, you might stand on the deck at all hours of the day, and watch whole flights of birds in all directions, winging their way to their old haunts. The penguin and eider-duck came in perfect clouds.

But the ship lay still fast locked in the ice, and seemed as if she would never get free.

However, on the last day of May a violent storm came on, and the snow fell in such heavy flakes, and with such force, that it found its way through every chink and crevice. It not only speedily lay like a thick covering over the whole deck, but even got on the clothing of the crew, and looked like fine white dust or meal. The fall was so thick that, though it was broad daylight, they could not see five steps before them. It lasted the whole day and the whole night; but towards morning a tremendous crash woke the terrified sailors from their slumbers, and seemed to shiver the ship to her very timbers. She reeled to and fro, and tossed up and down, as if in the wildest storm on the open sea, and the planks seemed giving way beneath their feet. The poor fellows hurried on deck with blanched faces, and at a glance discovered the

cause of the disturbance. The ice had broken all round into huge masses, which kept dashing against the vessel in mad sport, threatening every instant to crush her to atoms. It was a moment of intense suspense, for destruction appeared inevitable, when suddenly an enormous mass got under the keel, lifted up the ship, and hurled her away, with resistless force, right out of the loose floating ice, on to the firm part close to the shore, where she remained motionless.

It was almost a miracle that the ship was saved. Next morning the storm had swept the entire pack away to the south, and the sea lay smooth and clear, below the somewhat sloping ice on which the ship was resting. Officers and crew at once set to work, and before long the *Hope* was towed down into the water again. There she lay rocking on the smooth waves, perfectly uninjured, and ready to sail at any moment.

Chapter VIII.—The Last Journey.

SPRING advanced, now, every day, and not only the arrival of the birds, but the gradual appearing of plants and insects, gave evidence that winter's reign was over. On the 6th of June Robert caught a fly that was buzzing round his head, and Hans brought in a chrysalis, out of which a brilliant butterfly was trying to emerge. In a few favoured spots lichens and reedgrasses and heath flowers began to peep out, and gladden the eye with a prospect of once more seeing the fresh living green. Ptarmigans, snipes, and little ortolans swarmed about the ship, and kept up a continual chirping and twittering, which sounded like music in the ears of the sailors, after the long unbroken silence.

All these were sure tokens of the approach of summer, though the frost at night seemed sharper than ever, and the shore was almost everywhere covered with snow, as far as the eye could reach.

Now that the sea was clear again, the homeward journey to America might at once have been commenced, but such a thing was never thought of by any one on board. Captain Becker made use of the first days of June to get the ship into thorough order, and when this was fully completed, many consultations were held about the best means of resuming the search for the *Eleanor*. The dogs and sledges were in excellent condition, and the crew quickly got over the winter's sufferings. Captain Becker picked out four of the best men, who should accompany

himself and Hans, and, of course, Robert, in a fresh expedition. The doctor, too, was to be of the party. The remainder of the crew were to stay on the vessel under the command of Lieutenant Lowell, to whom Captain Becker committed the charge of everything during his absence. His orders were, not to leave the harbour on any consideration, but lie there at anchor till the return of the party.

The sledges were now got in readiness, and on a bright June morning the expedition started. Captain Becker pursued the course that Robert and Hans had taken months before, when they laid down the first store of provisions. At that time sea and land had been covered with hard ice, but this had given way in many places before the drifting snow, and considerably impeded their progress. In some parts it was already so weakened with the sun's rays that they could hardly get on at all, as they sunk foot-deep in it, and in other parts they were obliged to make a circuitous course to avoid being buried in snow-drifts left by the recent storm.

However, these difficulties were counted nothing by the hardy sailors, and by steady perseverance were soon surmounted.

Nothing of any importance occurred till they reached the first depot. Here they had confidently expected to find everything in good condition, and great was their alarm and consternation to discover that the bears had been making sad havoc amongst it. The masses of rock, and lumps of the stone and sand covering, which had been placed as protection against their attacks, lay scattered all around, and the whole hiding-place was destroyed.

"This is an awkward business," said Captain Becker, surveying the desolation. "If the two other stores are in a similar condition, we shan't be able to do much. Those tigers of the north have left nothing behind, you may be sure."

"Ay! but here is something, at any rate, that has escaped their clutches," said Robert, who had been making an examination. "Those tin cylinders, with their conical ends, have stood out against both claws and teeth. There they are, lying among the snow, and though some are quite bent in, and parts torn away, they have never succeeded in getting inside. The half of their contents will keep us in food for a fortnight.

"You are perfectly right!" exclaimed Captain Becker, in great glee; "the cylinders contain everything we require, so we won't fret over the loss of the rest. But what a feast the beasts have had! Everything is clean gone, it seems to me, except a few little barrels of salt meat that I see peeping out of the snow over there."

And so it proved on closer investigation. Of the kegs and casks nothing remained but a few bits of wood; even one that had strong iron hoops all round it was torn in pieces, and a great tin case, with spirits, was twisted up into a ball. Coffee, tarpauling, bread, meal, and all they came across had been greedily devoured by the bears, or torn to atoms, and scattered in every direction, and, as if in mere wanton destruction, they had even rolled the bread-barrels down into the sea, where they were yet lying among the masses of loose ice.

The expedition was forced to content itself with dragging the cylinders to the sledges, and sharing the supply among them, glad enough to get anything which would prevent a return to the ship being necessary.

The second depot was found in a similar condition, but the third, to the great joy of all, was untouched. True, there were traces enough of a vigorous attack, but the store had held out famously. The loss of the other two was not of so much importance now, for the provisions in this last were ample to keep the expedition in food for months.

Close to this depot they pitched their tent, which was sufficient protection against the inclemency of the weather, now that the mild season had set in. They waited a few days, to allow the dogs to recover themselves a little, after their long fatiguing journey, but Robert was so impatient that he grudged every moment's rest.

"The time is precious," he said to the captain, "and we must make the most of it. Every hour we are wasting here may be an hour of terrible suffering to my father. At least, let me, his son, begin the search."

"No, not you alone; we will all begin, and that the very first thing to-morrow," replied Captain Becker. "We will divide ourselves into two parties, and scour the region in different directions. Each party will take provisions enough for one week, and on the eighth day we will all return here."

"Agreed," said Robert; "but undoubtedly the party going north will have most to encounter, so let me go there, captain; you know I am prepared to face anything to find my father. Hans will go with me; and we two are quite enough."

Captain Becker made some objection to this proposal, remembering the promise he had given to Robert's mother; but the boy would take no refusal, and at length the captain said,—

"Well, go then! You are an obstinate fellow. But I go too; I will not abandon you to dangers which I am not prepared to share."

"But, captain, you are not a young man now," replied Robert, "and you forget we shall have to climb those towering icebergs and enormous

glaciers that are not half a league away from this. Your strength is not equal to that task, captain."

"Don't trouble yourself, boy, about me. I am no novice here. Not another word; it is all settled! We will try to climb over the glaciers, and the doctor with the others will try to get round them. Our aim is to get north, and I do hope one division, at least, will reach it."

So it was finally arranged. That very evening the sledges were prepared, and early the next morning they started off, well provided with provisions, and mattocks, shovels, ropes, and everything they were likely to want. The doctor and his companions turned to the left, and Captain Becker, Robert, and Hans took the straight path up to the glaciers.

It was smooth enough work till they reached the foot of the mountain-chain and began the ascent. It was a weary, toilsome climb indeed, without any path whatever. They soon came to the glacier, which spread itself for miles and rose in some parts in perpendicular walls five or six hundred feet high. But onwards the bold travellers pressed, beside precipices where one single false step would have been instant destruction, over fields of snow which covered many a treacherous *crevasse*, and across fearful abysses where the narrow plank that served as a bridge tottered beneath them. Often they were obliged to make a circuit, as the plank was too short to reach the other side of the gulf, and often, too, they had to cut steps in the ice when there was no foothold and the wall was almost upright.

But the most troublesome part of the business was to get the dogs and sledges on. More than once they had to carry the contents of the sledges piece by piece over the ice wall, or the dogs could not have dragged them along. It was frightful exertion to get over the ground at all, for its character changed perpetually, and after some leagues of walking, clambering, sliding on their backs, and sometimes sledging, they were all completely exhausted. They trembled in every limb and could hardly breathe. They managed to get one league further and then gave way entirely. Captain Becker was almost fainting, and Hans sat shivering on a snow-heap, looking the very picture of exhaustion. Even the dogs laid themselves down, their flanks steaming and their tongues hanging out of their mouths. Robert alone stood erect, for the thought of his father inspired him with strength and courage.

After a few minutes' rest, the captain said in a feeble voice,—

"It is no use—we must give it up! I cannot go another step."

Hans nodded his head gloomily, and was evidently of the same opinion.

"Well," said Robert, with firm determination, "whether you stay or go back, I mean to go on. Is all we have endured this whole winter to go for nothing? No! and though it cost my life, I must and will cross that mountain and search through the bays on the other side."

Captain Becker tried in vain to dissuade him from making an immediate attempt. He filled his pockets with provisions, slung his rifle and hunting-pouch over his shoulder, and stuck a hatchet in his belt.

"Good-bye, captain," he said, "good-bye, Hans. If you don't see me again, pray for me; and you, captain, must comfort my poor mother. I will finish my task or die!"

So, shaking hands with his companions, he pushed on courageously. The captain and Hans vainly tried to follow, when they saw him so resolute, but their exhaustion was too great. They were obliged to let him go alone, and all they could do now was to pray for him.

But Robert's courage never wavered one single instant. After he had gone about a league further, he found, to his surprise and delight, that the ice wall became less steep, and he could climb it much more easily. All at once a sort of level path opened before him, which led apparently to the highest summit of the glacier.

With fresh spirit he struck into it, and kept on steadily till a sharp bend in the road brought him quite unexpectedly to a point which disclosed to his view the whole region lying north of the ice-mountains. He had actually reached the other side of the glacier, and his courage had been amply rewarded.

He stood motionless for a while, as if stupefied with his good fortune. At length a joyful cry escaped him, and he sank on his knees in prayer.

Then he began to consider the best course of action. Should he go back and tell the news to the captain and Hans? No, it was far too late, if he wished to get right down, that day, to the foot of the mountain. He would need to hasten as it was, so with a bold heart he took the road again. He found this northern side was not nearly so steep as the other, and managed to get on with tolerable speed.

Further and further he went, walking and sliding, sometimes gliding on his back or leaping, till he came to another broad ice wall. To avoid climbing this, he took a circuitous route towards the west, and presently a prospect met his gaze which made him stand as if petrified. Clear open water lay before him, like a smooth, shining mirror, stretching far away to the north and north-east, where it was shut in by another boundless field of ice. Robert scanned both sea and shore as far as the eye could reach, but everything looked drear and desolate, as if no human footstep had ever trodden that region. A melancholy fear that

it was vain to dream of finding his father in such a spot crept over him, and tears rushed to his eyes. He felt so full of grief that he scarcely noticed how they froze as they fell, and became drops of ice.

Almost mechanically he went on, though his confident hope had given place to sadness. All at once he came to the edge of an ice wall that rose perpendicularly out of the sea. He drew back in terror, for he had not looked where he was going, and one step more would have plunged him headlong below. He measured the precipice with his eye, and suddenly rent the air with a wild shout. He actually staggered with surprise, and was forced to cling tight to the cold ice with both hands to keep himself from falling over. Could he be dreaming? He looked again, and again a loud cry escaped him—a cry of exultation and rapture and unspeakable happiness. His senses almost forsook him, for he saw down below, lying close to the shore, a ship—a large, beautiful brig; and, both on deck and on land, he could see men moving busily about at work, and also a little boat putting off from the vessel for the shore.

This was indeed a surprise for Robert. Was this, could this be the *Eleanor*, his father's ship? The distance was too great to tell with certainty, and Robert stood thinking a while. Then it struck him that he had surely a telescope in his hunting-pouch. He soon found it, and adjusted it to his eye; but he trembled like an aspen leaf in the wind, and could see nothing. He was obliged to throw himself on the ground, and steady the instrument on his hunting-pouch. Once more he looked, and a single glance revealed all. Yes, it was the *Eleanor* that lay there at anchor, his father's own ship! Scalding tears ran over his cheeks as he clasped his hands in thanksgiving; but his emotion so overpowered him that he could only stammer out, in broken accents,—

"O God! my God!——I thank Thee. It is the *Eleanor*, my father's ship!"

It was a long while before he recovered sufficient composure to proceed. At last he rose, and looked for some way of getting down the precipice. A little distance off, the ice seemed more sloping, so he hastened in that direction, and managed to gain the bottom in safety. Breathless and panting, and bathed in perspiration, he reached the group of men on shore. All he could say was, "Captain Griffin! My father! Is he alive?" He just heard the reply in the affirmative and a loud shout from the sailors, and then became unconscious. He had fainted from exhaustion and intense emotion.

When he revived, he found himself in his father's arms, who loaded him with the tenderest caresses, and overwhelmed him with questions

about his unexpected appearance. But it was long before Robert could give any connected account of himself and his doings. Captain Griffin and his men listened to the recital in joyful amazement, and burst forth in a hearty round of cheers for Captain Becker and Robert when it was ended.

"Though we have not hitherto suffered any actual privation," said Captain Griffin, "it is undoubtedly to your arrival only that we shall owe our deliverance. For two winters we have been frozen up in this bay, and, to all appearance, our ship will never be free again. That expanse of ice, which stretches for miles towards the north-west, separates us like a wall from the open sea, and is an insurmountable barrier. It will likely not give way till some unusually warm summer; and who can say how long one may wait for that? Long ago we should have abandoned the ship to her fate, and attempted to get back on foot, had we not known but too well that such an attempt was hopeless, and could only end in complete destruction to all of us. The nearest settlements are hundreds of miles distant, and we had neither dogs nor sledges to enable us to carry sufficient provisions, so that death through cold or hunger must inevitably have been our fate. So we preferred waiting here, hoping that some fortunate chance might free us; and meanwhile we have kept ourselves alive partly by hunting and partly by our remaining ship-stores. But, thank God, you have come! I hardly think we should have managed to weather another winter in this inhospitable region, for our stock of food was coming to an end, and hunting alone would not afford us a sufficient supply. So welcome, my boy, a thousand times welcome! and blessings on you for your faithful love. But for your courage and perseverance in continuing your way alone, you would certainly have never discovered us, and probably by next spring all that would have remained of us would have been our frozen corpses."

Again he hugged his son to his breast, and neither father nor child could restrain tears of joy, while the crew burst forth in another cheer for Robert, and crowded round him as their deliverer.

But Robert modestly refused their praise, and said, reverently,—

"To God alone be the glory! Let us praise and thank Him! He guided my steps, and gave me strength to go on when my friends failed. To the God of all grace be the thanks and glory and honour!"

It was, of course, too late to think of recrossing the ice-mountain that day, but the night was spent in making preparations for the journey, and early in the morning they started. The crew carried all their valuables on their shoulders, and everything else was left in the ship

to its fate. But nobody made any lamentations over the loss of their property. Joy was in each man's heart, and deep gratitude that the long, dreary captivity was so happily brought to an end.

The march over the glacier took six whole hours, and was toilsome enough, but it was well repaid by the joyful meeting at the station. The two old friends sank into each other's arms, deeply moved at the thought of all that had occurred since they last met.

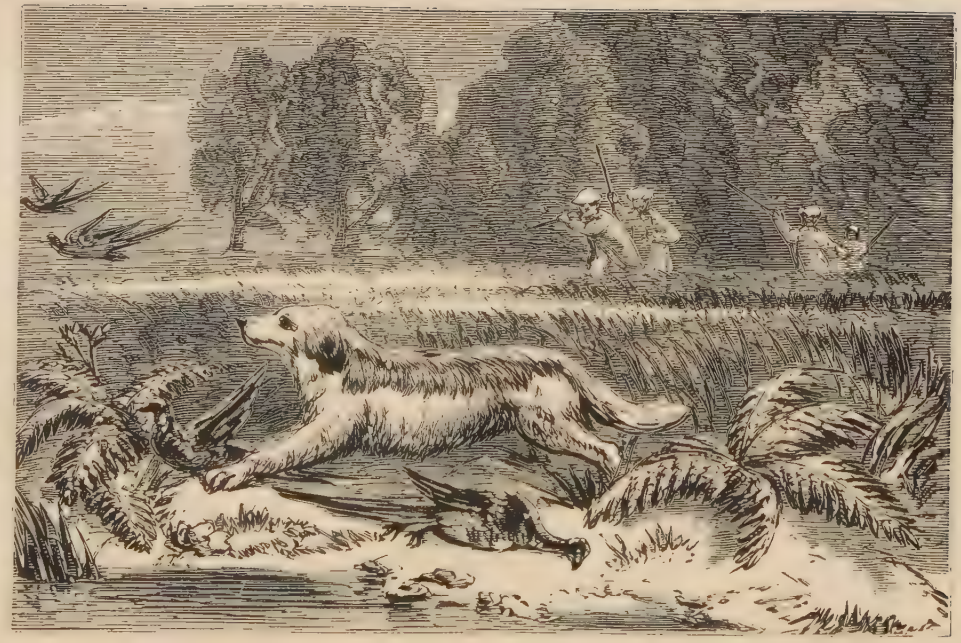
Hans was immediately dispatched with the fleetest dogs, to bring home the doctor and his party, as there was no occasion for any longer stay in the north. They all got back next evening, and fresh greetings and congratulations followed. It seemed a miracle that the long-lost should have been at last found, and found alive.

Little more remains to be told. Our friends reached the ship, which was lying quietly at anchor in the bay, in tolerably good condition. She soon set sail and got out into the deep sea on her homeward voyage to America. Hans was dismissed to go back to his own people. He was liberally rewarded for his services, but seemed very unwilling to leave Robert, who had completely won his heart.

The voyage was most prosperous, and ere long the *Hope* ran in once more to the harbour of New York, and before an hour had passed Mrs. Griffin had embraced her husband and her brave, noble son, who had so truly done his part in rescuing his father.

Peace and happiness once more took up their abode in the home of Captain Griffin. His passion for adventure was at rest from this time, and he devoted himself wholly to his family. Captain Becker always remained their most intimate friend: he was honoured, loved, and held in great esteem by every member of the household. He often spoke of the courage and perseverance Robert had displayed, and always said frankly that but for the stand he made at the last, their expedition would have been a failure. But Robert himself never ceased to say,—

"The glory belongs to God! I was only the instrument in the Father's hand, and He kept up my feeble strength, and put me in the right way. Do not make me ashamed, Captain Becker; I did my simple duty. All praise and glory and honour be to the Lord alone."



DANDY A POACHER.

The True and Wonderful History of the Dog Dandy.

BY HIS OWN MASTER.

CANTO THE THIRD.

DANDY A WIDOWER IN ENGLAND.

XLIX.

Behold us, then, return'd once more
To our own native English shore,
Old "Dandy" with us, as of yore.

L.

We left him in Bengal behind,
But could not reconcile the mind
To separation so unkind.

LI.

So, soon he follow'd in a ship,
After we gave him thus the slip,
And seem'd much better for the trip.

LII.

The Captain and his sailor crew
Wept loud while bidding him adieu,
Waving their hands till hid from view.

LIII.

Coaching through London's crowded street,
The Prince and Princess,* as was meet,
Came forth in chaise to gaze and greet.

* This actually occurred while Dandy was *en route* from the docks to the west end of London.

LIV.

Dandy, with tail in constant motion,
Express'd his loyal heart's devotion,
Giving of his high breed a notion.

LV.

Astonish'd much at all he saw,
He eloquently waved his paw,
While loud "bow-wows" employ'd his jaw.

LVI.

But soon, with love of freedom fired,
Of a town pent-up life he tired,
And to some country sport aspired.

LVII.

Accepting a friend's invitation,
He started from a railway station,
And was received with loud ovation.

LVIII.

Four lovely human sister graces
Rush'd to the door with frantic faces,
And smother'd him with fond embraces.

LIX.

While their four brothers, one in mind,
Seized each a paw in struggle kind;
Two pull'd before and two behind.

LX.

Dandy, enraptured with each kiss,
Thought, "*If there be a bower of bliss*
For dogs on earth, oh! it is this!"

LXI.

Right merrily time now flew past;
But soon the sky grew overcast,—
Such pleasure was too great to last.

LXII.

Whether by instinct or by reason,
Dandy divined 'twas shooting season,
Nor deem'd a day's sport could be treason.

LXIII.

For he was neither knave nor fool,
But had been bred in freedom's school,
Where "game laws" exercise no rule.

LXIV.

One day they walk'd him off to cricket;
But, while the boys play'd "single wicket,"
He cast an eye on yonder thicket;

LXV.

And, lolling waggishly his tongue,
Said to himself, "Now, I'll be hung
If I'm not soon those trees among!"

LXVI.

No sooner said than done, egad!
Off to the woods he dash'd like mad,
And after him strode each stout lad.

LXVII.

But soon, alas! his pleasure ended;
For, sniffing where the *pheasants* wended,
He had been shot unless befriended.

LXVIII.

Keepers, enraged at loss of game,
Dandy a "poaching thief" proclaim,
Giving him thus an evil name.

LXIX.

So back he hurried straight to town,
With his tail drooping sadly down,
And on his noble face—a frown!

LXX.

That night he groan'd aloud in sleep;
His thoughts were far beyond the deep,
Where Flora lay—'mid mould'ring heap.

LXXI.

To dissipate his melancholy,
He tried a round of London folly;
But vain the effort to be jolly.

LXXII.

Tho' free o'er Rotten Row to range,
All seem'd insipid, stale, and strange:
The doctors recommended change!

(To be continued.)

A Rowing Match.

WHAT more healthy and beneficial exercise is there than rowing, and what more interesting and exciting scene than a boat-race? The Oxford and Cambridge annual race may be mentioned as an example. This, however, is not the subject of my essay. I am going to attempt a description of the Cambridge University eight-oared races, in which, instead of two, there are twenty boats rowing at the same time.

It may be well, before proceeding to give an account of the races themselves, to describe how they are managed. Every College has one or more boats on the river, making up altogether forty; and of these, on account of their great number, two divisions are formed—the first division consisting of the best twenty, and the second division of the remainder, and only one of these divisions races at a time. It is unnecessary to give a list of the boats in the two divisions; but it may be mentioned that at Trinity College there are three clubs: the third club consisting entirely of Eton and Westminster men; the second, of scholars and reading men generally; and the first, which is the strongest, taking in all the rest. The first boat of this club is at present head of the river. I must explain, however, what is meant by a boat being head of the river.

Every boat has its position on the river, and from this position it starts at the commencement of the races. The first of these boats is called the head of the river. At the commencement of the races, then, the boats are placed in their relative positions, one behind another, and

at a fixed distance apart, and it is the object of each boat to bump the one in front of it. When a bump is made between two boats, they exchange places, and start from their new positions on the next day, and so on for the four or six days during which the races last; and the positions which they respectively occupy at the end of that time are the positions which they take at the beginning of the next races.

So much for the manner in which these races are conducted.

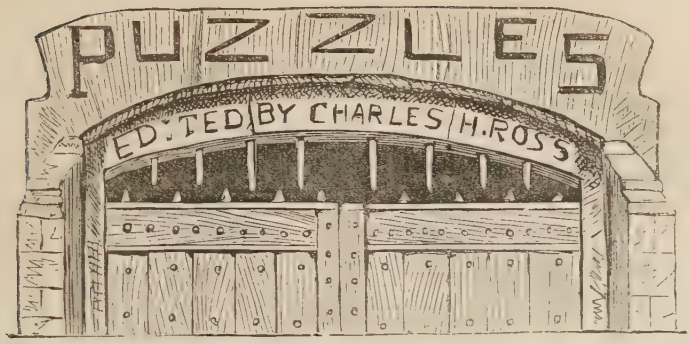
Training generally commences about a fortnight before the first day of the races, and during this time the boats are daily rowed over the course, attended by their "coaches." At the end of the fortnight most of the crews have been worked into good condition for rowing, though it by no means unfrequently happens that one or two of a crew break down in their training, and to make up for this deficiency, two or three extra men are kept in training, ready to be put into the boat whenever they are wanted. The improvement which has been made in the rowing during training is generally very great. At first the time is bad, there is not sufficient "swing" or "catching at the beginning," and there are many other faults, most of which are generally remedied before the end of training.

Now comes the first day of the races, and a busy and exciting day it is. Some of the crews are confident of success, while others hope for the best, though their hope is not unmingled with fear. It is two o'clock. A gun is fired at one of the boat-houses as a signal for the last boat on the river to start for its place at the end of the course. The others follow in order and in close succession till they arrive at their respective positions, where they land for a short rest before the race, which commences at three o'clock. During this time the banks of the river assume a gay and varied appearance, as those of the undergraduates who are not rowing, most of them in their boating uniforms, come flocking down to see the race, all anxiously eyeing the strength of the different crews and speculating on the chances of certain bumps being made. But it must be remarked that the undergraduates are not the only persons who line the banks for the purpose of seeing the race: a fair amount of ladies also may be seen on either side of the river.

At four minutes to three o'clock a gun is fired as a signal for the crews to get into their boats, and three minutes after that a second gun is fired, when all the boats are pushed out from the banks and prepared for the start. The appearance now presented by the boats and their crews, all in a line in the middle of the river, is not easily described; and the beauty of the scene would scarcely be imagined from a description of it.

At last the signal is given:—5, 4, 3, 2, 1 gun, and they are off. How the men do toil in endeavouring to retain their places, or to get up a place higher! They work as if their life depended on the result, stretching forward as far as they can reach, and with their whole weight pulling their oars through the water. Many of them are not long kept in suspense, but are put out of their misery by being bumped, and so finish their work for the day. But we will follow a little more closely one of the boats, which is now gaining on that before it. Both crews are evidently well trained to their work, and keep it up manfully. They are cheered by the loud shouts of their friends from the bank—"Well rowed!" "Now you're gaining!" "Keep it up!" The two crews pass round some of the prominent corners, without showing much difference of strength between them; but still the hindmost boat is gradually gaining on the boat before it. It is a good race, but it is evident that the foremost crew must soon give in, as they are being overtaken by their opponents. They keep it up as long as they are able, but are at last bumped, having fought so hard for victory that they have tired their conquerors almost as much as they have tired themselves. The two boats now row in to the bank, to make room for the others to pass, while the victorious crew, displaying their flag, fix it in the stern of their boat. Several other bumps have been made, some soon after starting, some near the end of the course; but the greater part have had to toil over the course without either making a bump or being bumped themselves.

It may be observed here, that in these eight-oared races a great deal depends on a good coxswain, especially on a river like the Cam, where many of the corners are so prominent, that it is with the greatest difficulty that a boat sixty feet long is steered round them. After the race is over, most of the crews row up to their boat-houses, though some prefer walking home, and reserving their strength for the next day. It is amusing to see the confusion just after the race, caused by the great number of boats all endeavouring to start at the same time. The number is sometimes so great, consisting of eights, fours, pairs, and canoes, that the river is completely blocked up for a short time; but when these have all left the river is as quiet and deserted as ever, till the next day, when the same excitement again prevails. The races on this day differ in no respect from those of the day before; and so my account ends.



1.

Commerce.
To ruin.
A proportion.
To pinch.
To prove.
A record.

The *initials* and *finals* give the names of two English painters.

2.

Entire, I'm seen in every land,
Your leisure hours I gain ;
Behead me, and I am the juice
Of what is grown in Spain.
Behead once more, cut off my tail,
Or me to find you'll fail.

3.

A novel invention.

1. A town in France — 9, 6, 8, 7, 7, 10.
2. A bird of the Bible—9, 4, 1, 2.
3. Passion—3, 4, 1, 10.
4. A spice—5, 3, 4, 1, 8.
5. A useful force — 7, 4, 3, 6, 5, 10.

4.

My *first* is generally about one foot long,
My *second* is a sailor,
My *whole* is to remove my first.

5.

Cryptograph.

Voaha slj l jbkzr be hataxhg mg zuiov,
Lzr mnxiuky'j nlcuvlx olr ilvoah'r voaz
Oah mnlkvg lzr oah noutlxhg ; lzr mhuiov
Vou lxyj jobza bah elcch sbyaz lzr mhlta yaz ;
L vobkjbzr oalhvj mnlv olccuxg ; lzr soaz
Ykjun lhbja suvo uvj tbxkcvkbkj jsaxx,
Jbev agaj xblq'r xbta vb agaz souno jclqua liluz
Lzr lxx sazv yahhg lj l ylhhulia maxx ;—
Mkv okjo ! olhq ! l raac jbkzr jvhugaj xuqa l hujuzi qzaxx.

Word Squares.

6.

A tool.
An animal.
A tribe.
Egress.

7.

An orb.
Man's name.
A late king.
A time.

8.

An ornament.
Notion.
Tidy.
Entrance.

9.

A musical instrument.
A country.
Tools.
A relation.
Fertile spots.

10.

A vessel.
To issue from.
A Roman emperor.
A keeper.
A covering.
One of the United States.
A wave (beheaded).
A state in N. America.
Well known.
An Eastern potentate.
A fixed salt.
A vessel.
A monarch.
A mould.
A dye.
An idea.

The *initials* and *finals* of the above read downwards will give the names of two celebrated Americans.

11.

My *first* is one half of each songster sublime;
My next is two-fifths of imagination;
One hundred, fifty, and a portion of time,
Form my *third*, or three-fifths of a near relation;
My *whole*, you will find, is a novel invention,
Its name, I presume, all are able to mention.

12.

A plant.
Utmost.
A trial.
A pipe.
A tool.
A sphere.
Indefinite.
To rouse.
To count.

The *initials* and *finals* give the names of two eminent composers.

13.

An ecclesiastic.
Genuine.
A plant.
Hideous.
An interjection.
A pronoun.
To neglect.
Near.

The *initials* and *finals* give the names of two English towns.

14.

I (2) intended (3) to have dismissed (1) you.
My whole is a feeling.

15.

I was weak enough (2) to desire (1) the fruit.
My whole is to be wished for.

16.

He had a smaller portion (2) of capacity (1).
My whole is unreasonable.

Authors.

17. Taste jam W.
18. O finale deed.
19. R. Ned drew Jane.
20. Drives hog to mill.
21. Age kills Henry C.
22. J. Ruler sold a dog.
23. June sham Solon.

Cryptograph.

24.

Gsv ozhg hzw slfi lu uivvwln'h wivzm,
Zmw ezolfi'h gzhp, nle'w holdob lb,
Dsrov nfgv gsvb dzgxs'w, groo nlimrmt'h yvzn
Hslfow irhv zmw trev gsvn ortsg gl wrv.
Gsviv'h bvg z dliow dsviv hlfoh ziv uivv,
Dsviv gbizmgh gzrmg mlg mzgfiv'h yorhh;
Ru wvzgs gszg dliow'h yirtsg lkvrmrt yv,
Ls! dsl dlfow orev z hozev rm gsrh?

Transpositions.

25.

I am a bird, transpose me and I am a part of the body.

26.

I am subject to various transpositions. I am a place; I am flying all over the country; I come to a stand-still. Drop one letter, and though I am at the head of everything I am constantly turning round; transpose, and then though constantly in the kitchen I am as often at the top of the house.

27.

At my *first* you may have seen
Men of intellect, and of different mien:
Intellect, for the rich or poor to plead,
When in cases most their aid they need.

My *second* in olden times was often used,
And many by it have sorely been abused;
My *whole's* a scene of very active life,
In me people live less, though, in times of strife.

Hidden Towns.

28. He likes wicked men and their ways.
29. A beau of that period wore a powdered wig and a cocked hat.
30. They were only kept under by a large military force.
31. Their rules strictly forbade all kinds of excess.
32. Old ale I think preferable to wine.
33. He appeared paler, more harassed and careworn than ever.
34. But Solomon built him an house.
35. Can you tell me why they run?

36.

My 5, 7, 8, 9 is an instrument for the hair.
My 3, 4, 1 is a point of time.
My 5, 1, 2 is a conveyance.
My 4, 7, 8, 11 is a town in Italy.
My 9, 3, 1, 4 is an animal.
My 6, 10, 9 is part of the body.
My *whole* is a celebrated general.

37.

Triple Acrostic.

My *first* was a serpent slain by Apollo;
A nutritious drink (reversed) will follow;
My next to you a governess will name;
My *fourth* a kind of passage for your pains;
My *fifth* a town in Italy of some fame;
My *sixth* and last a female animal will name.
My *initials*, *second letters*, and *finals*, reading down,
Will name a moral song of great renown.

Word Squares.

38.

A race.
Misty.
A precious stone.
Weight.

39.

A preposition.
Solitary.
Part of the human body.

40.

A metal.
A river in N. America.
An animal.
A participle.

41.

An adverb.
A tract of hollow land.
A conjunction.
A plant.

42.

An inheritor.
A river.
A bird.
Quiet.

43. Come not in, Dan.
44. Is vinegar meat?
45. My dear Rod.
46. I sew care.

KEY TO PUZZLES ON PAGES 381—384.

1. Discontinuation.
2. Trafalgar.
3. Ragamuffin.
4. Bannockburn, Robert Bruce.
5. The Vicar of Wakefield.
6. Dombey and Son.
7. Doctor Birch and his Young Friends.
8. John Halifax, Gentleman.
9. Masterman Ready.
10. Oath, Ague, Tune, Heed.
11. Pang, Aqua, Null, Gall.
12. Scad, Core, Area, Dear.
13. Disc, Idea, Sear, Cart.
14. Doll, Olio, Liar, Lore.

15. Cryptograph.

A law there is of ancient fame,
By Nature's self in every land implanted,
Lex talionis is its Latin name;
But if an English term be wanted,
Give your next neighbour but a pat,
He'll give you back as good, and tell you—
Tit-for-tat.

16. Pineapple, Raspberry.
17. Because it is the capital of Russia.
18. Christopher Columbus.
19. Alfred the Great.
20. Cardinal Wolsey.
21. William the Conqueror.
22. Captain Marryat, Masterman Ready, Midshipman Easy.
23. Esther.
24. Genesis.
25. Hosea.
26. Malachi.
27. Colossians.
28. Turkey, Greece.

29. Cryptograph.

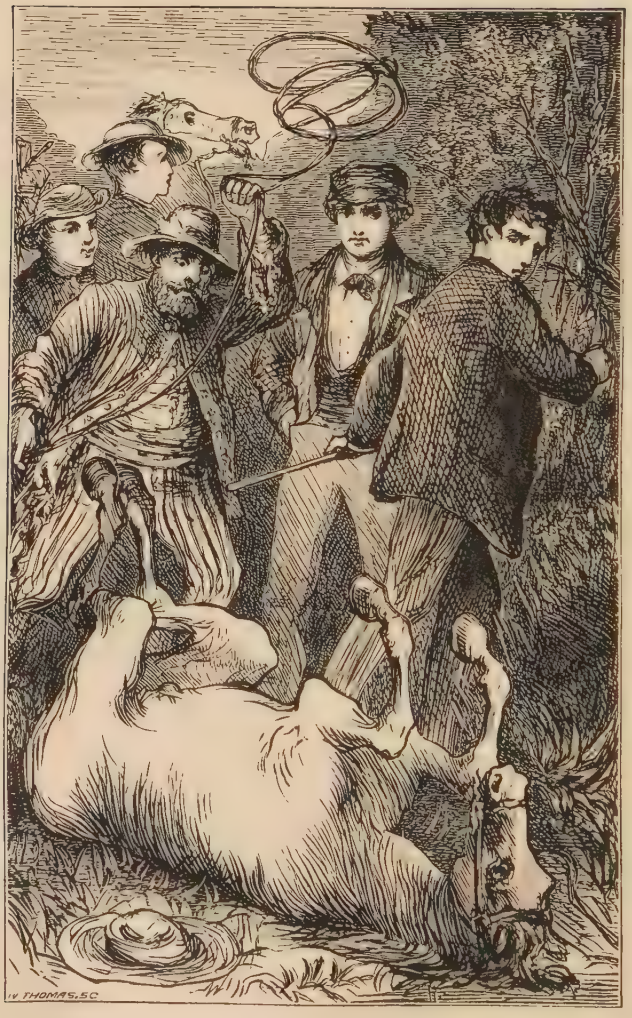
The friends thou hast, and their adoption tried,
Grapple them to thy soul with hooks of steel,
But do not dull thy palm with entertainment
Of each new-hatch'd, unfledg'd comrade.

30. Ducat, Usage, Cavan, Agate, Tenet.
31. Anvil, Noise, Villa, Isles, Leash.
32. Neath, Enara, Aarau, Train, Haunt.
33. Masterman Ready, Captain Marryat.
34. Killiecrankie
35. Malplaquet.
36. Solferino.
37. Chillianwallah.
38. Vittoria.
39. Culloden.

40. Cryptograph.

Hence pale grief and anxious care,
With black misfortune's baleful train,
Where pensive sorrows ever reign,
Or fill some dreary cave of dire despair,
Fly to yon mountain's lonely brow,
List to the tempest's troublous roar.
Michael Tyson.

41. Publius Virgilius Maro.
42. Quintus Horatius Flaccus.
43. Publius Cornelius Scipio Africanus.
44. Lucius Sergius Catilina.
45. Publius Terentius.
46. Arthur, Merlin.
47. Three Balls, Pawnbroker.
48. Link.
49. Spain.
50. Earl of Aberdeen, Lord Palmerston.



"He is punished enough."

STEPHEN SCUDAMORE THE YOUNGER;

OR,

The Fifteen-Year-Olds.

A STORY OF BOYS' ADVENTURES AT HOME, ON BOARD A PASSENGER SHIP, AND ON THE AUSTRALIAN GOLD-FIELDS.

By ARTHUR LOCKER.

PART VI.

Captain Spanswick's Farewell Palaver.—Prawle's wonderful Feats of Horsemanship.—We make a Start.—Observations of the Populace.—A Visit from Two Policemen.—The Diggers' Wedding Excursion.—Alarm of Titicaca.—A General Stampede.—Titicaca's Humiliation.—Mysterious Disappearance of Tom Harvey and Coalscuttle.—The Fifteen-foot Gully.—An Execution.—Camping out.—A Storm comes on.—Our Tent torn to Tatters.—Torrents of Rain.—Bread and Brandy-and-Water for Tea.—The Rain abates.—Lively Jemmy's Wager.—Prawle accepts the terms.—How to light a Fire on a wet Night.—Extraordinary Conduct of Señor Robinson.—Flight of Titicaca.—The Pursuit.

HERE is an old song which most of my readers have heard, and which my sister Lucy was fond of singing. The *refrain* runs thus:—

O ladies, beware of a gay young knight—
He loves—and he rides away.

These words came into my head when Captain Spanswick, mounted on his brown cob and looking as spick-and-span as if he and his steed had just been turned out of a band-box, rode up to our tent-door and delivered his farewell oration. Our departure had been delayed for two or three days, as we had not been able to buy some of the provisions which we wanted; but at length everything was ready for a start. The captain, as I have already observed, was going up the road before us as a pioneer—an *avant courrier* he preferred to call himself—and in this parting address with which he favoured us, he expatiated in glowing

terms on the benefits which we should derive from his proceeding in advance of the remainder of the party.

"I have given Señor Robinson," he observed, "exact written directions where to find me on Golden Gully; and by the time you get there you will be able to participate in the following advantages. I shall have secured a cash purchaser for the packhorses and their loads—you will simply have to deliver the animals, and pocket the money. I shall also have 'marked out a claim,' which, if I mistake not, will make all our fortunes." (Prawle's eyes glistened at these words.) "I don't wish to boast, gentlemen, but I do not sink my shafts at haphazard, as most of these ignorant uneducated diggers do. I select my field for gold-mining operations on the strictest geological principles, as approved by Sir Roderick Murchison."

"I have a book by Sir Roderick, which my father gave me," whispered I to Prawle.

"Gentlemen, I believe I may safely say that on my plan we are sure of success. Three months of moderate exertion will put each of us in possession of a handsome fortune. Good-bye. I wish you all luck on the road: Mr. Prawle, might I trouble you for a light?" Prawle immediately handed his superior officer a red-hot brand from the fire, with which the gallant captain lighted his cigar. He then waved his hand gracefully to us, and cantered off in the direction of Mount Macedon.

"He loves—to talk of the diggings—and then he rides away, leaving us to shift for ourselves," thought I to myself, recalling the words of the old song; but I did not whisper a syllable of my discontent to Prawle or my other companions, for I found that Captain Spanswick's farewell speech, from which I have only given a short extract, had made a vast impression upon them, and that they were fully convinced that they would very speedily have their pockets stuffed with golden nuggets. When I speak of my companions, I mean such sanguine young fellows as Harvey, Wallington, and Prawle; for Señor Robinson was probably too old a soldier to believe that he would acquire a fortune on such easy terms. But, being a simple-minded creature, he seemed quite content that the captain should do all the talking, provided he was allowed to do all the hard work, and he muttered with evident admiration, as he rolled up some tobacco for a cigarette,—

"The captain is a very clever man, a very clever man indeed."

The Señor had taken advantage of the delay which had occurred to train our unruly horses for their future vocation. Sham packs were constructed; for example, a quantity of stones and pieces of wood were rolled up inside of a pair of blankets, and fastened on each animal's back

in succession. Desperate, at first, was the kicking, plunging, and rearing; but the Señor was wonderfully calm and patient, treating the horses as if they were children, and only administering blows when all other means of persuading them had been tried in vain. When, however, he did thrash he thrashed tremendously, his eyes glittered ferociously, he danced round his victim like a little demon, and left the poor animal in a lather of sweat, trembling in every limb. Prawle's yellow horse, Gamboge, and the Señor's chestnut, Titicaca, were, as he had prophesied, the most unruly of all the cavalcade, and they both underwent in consequence a severe flogging.

During these two or three days of training, Señor Gonzales Robinson carefully studied the characters of his two-legged companions, as well as those of his horses. I soon perceived that he did not esteem Harvey and Wallington very highly. They were useful, handy, and tolerably obedient fellows, but they entertained a strong dislike to our half-wild uncertain-tempered steeds, and gave them as wide a berth as possible, preferring any occupation, such as cooking, or fetching wood and water, rather than handling the horses. As for myself, I must not sound my own praises, but I felt much pleased when the Señor said to me, "In time, Mr. Scudamore, you will learn well how to manage horses, because you are patient, and you try not to be afraid." But as for Prawle, he fairly astonished all of us. I don't believe that until he landed in Australia he had ever been across a horse in his life; indeed, he hinted that he had never bestridden any nobler animal than a Blackheath donkey, and that he had as often found himself under its belly as on its back. But now he came out in a wonderful way. Perhaps it was that his legs had grown so much longer since he was a small boy; perhaps the pure Australian air had invigorated his nerves; whatever was the cause of his courage I cannot say, I can only affirm that he leapt on the back of one horse after another, and though unprovided with saddle or bridle, and in spite of all their kicking, and bucking, and plunging, he stuck as firmly to them as the Old Man of the Mountain stuck to poor Sindbad the Sailor. Jemmy Wallington rather enviously observed that Prawle's legs were so long and so flexible that he could tie them in a double knot under his beast's stomach, and that thus he became a sort of Centaur, firmly attached to his seat. It was the greatest fun in the world to see him careering about on Gamboge, without any hat on, his hair all on end, and his great goggle eyes staring out of his head. He carried nothing in his hand but a stout stick. First, Gamboge would wheel round and round; then he would stand on his forelegs, as if he had just alighted

from a leap; then he would stand on his hind legs, like a lion rampant. And, incredible as it may appear, while in this latter position, which he retained for upwards of two minutes, as if he had been educated in a circus, his rider, leaning forward so as to accommodate his long body to the singular attitude assumed by his horse, gravely addressed us in the following words: "Ladies and gentlemen, you here behold the celebrated Joao Praolo, the barebacked Brazilian rider of the inaccessible Andes. Fearless are the feats which he will perform on the back of his utterly untrained steed Gamboge. In the first place——" Here Prawle's oration came to a sudden and ignominious end, for a new idea suggested itself to the mind of Gamboge by which he might get rid of his tormentor. He suddenly threw himself backward, and began to roll about as a donkey does when he is taking a dust-bath. It was a mercy that he did not break poor Joao Praolo's neck; but that astute native of Greenwich was too quick for him. He untwisted his legs, threw himself off, and alighted on his feet; at the same moment Señor Gonzales skilfully tossed the bight of his lasso over the mischievous animal's head, and then gave him such a basting with his heavy whip, that the poor creature remained for several hours after as sober and well-behaved as an elderly hackney-coach horse.

At length we were ready for a start. Early one morning soon after daybreak we struck our tent and packed our household implements, leaving them and Titicaca temporarily in charge of Jemmy Wallington. The other four of us, taking the four remaining animals, then proceeded into town to load up our provisions, intending on our return to pick up Jemmy, and place the tent and blankets, and pots and pans, on Titicaca's back, who, being the least manageable of all the team, was destined to carry that part of our property which could not easily be damaged by a tumble. Our journey into town was unaccompanied by any misadventure. One after another the horses were loaded with a carefully selected cargo of provisions, and then we started on our route. We were all in high spirits, the sun shone brilliantly, making the air, which had felt very sharp at sunrise, quite warm and genial, and our cattle behaved remarkably well. The Señor marched at the head of our cavalcade, leading Jemmy's brown mare Topsy, while Prawle brought up the rear with Gamboge. On a retreat the rear is said to be the place of honour; in our present progress Prawle found it to be the place of chaff. All the idlers along the streets which we traversed were attracted by the oddity of our little Mexican commander, with his tunic of Lincoln green, and his punchy figure; but they were afraid to laugh at him, because there was such a ferocious gleam in his eye,

and such a formidable pair of pistols in his belt; so they indemnified themselves by roasting our long-legged rear guard. "I say, Lanky, give us a nobbler out of that barrel." "You've cast your near hind shoe." (This was in allusion to our horses being all unshod.) "He's a green 'un, in spite of his red face." "Yes, you can hear the emigration-peas still rattling in his inside." "I say, Long-legs, come up for your soup and bouilli." (This referred to a common summons on board a passenger ship.) Prawle answered his tormentors very good-humouredly, but we all felt glad when we were clear of the town. We could not help being new-comers in the colony, but we did not like being twitted with the fact. At length we reached the spot where we had left Jemmy Wallington. Here I must tell you, first, what we expected to see; secondly, what we actually did see. We expected to see Jemmy waiting quietly alongside of our packages, and Titicaca with his hobbles on, busily eating his luncheon. Instead of this we perceived that the tent, blankets, and other implements had been piled in a clumsy heap on Titicaca's back, and that he was in charge of two policemen, who were, by dint of hauling and thrashing, endeavouring to urge him forward, while Jemmy Wallington stood by, the picture of bewilderment. One of the policemen was very tall, the other was very short. "Hey!" cried Señor Robinson, addressing the shorter of the two, "what are you doing with my property?"

"What am I doing?" answered the policeman, impudently. "I'm helping this young fellow's horse along the road. Very kind of us, ain't it?"

"How came you to load up, Jemmy, without waiting for us?" asked Tom Harvey.

"The police made me load. They told me I was trespassing here. They say they have orders to remove all tents unless each of the owners pays five shillings a week for a squatting license."

"Is this law?" asked Señor Gonzales.

"Yes," answered the policemen.

"Then it's a shame," he exclaimed indignantly; "a burning shame, in a country where millions of acres are lying wild and uncultivated, to compel poor creatures who have only just landed with perhaps not a shilling to spare in their pockets to pay such a tax."

"That's no affair of mine, Mr. Greenshirt," said the tall policeman. "My business is to see that the law is carried out. Come now, we don't want to be hard on you. If we chose, we could take the lot of you down to the police-station, and have you fined forty shillings apiece for sleeping here last night unlicensed. We won't do that, eh, Bill?"

"No," answered the other. "Square us with half a crown apiece, and a drop of something out of one of those barrels, and we'll say nothing more about it."

Here Prawle whispered something to me. "I say, mister constable," he then said, addressing the tall policeman, "didn't you come out on board the *Ruth Hayward*, and isn't your name Jackson?"

The tall policeman looked rather foolish, and let go of Titicaca's halter, which was fortunately immediately taken by Señor Robinson.

"Ah, I see you are Mr. Jackson," continued Prawle. "I hope the twins are well, and I hope they pay you better here than they did when you were pacing up and down Great Scotland-street, Liverpool?"

"Have you forgotten, Mr. Jackson," said I, "that on board ship you used to accuse Hennessy and me unjustly of giving you short weight? Are you treating us justly now in trying to screw a bribe out of us?"

"I was only chaffing ye, Master Scudamore," answered Jackson, with an uneasy laugh. "Sure I reckonised ye the first moment ye came up. Come along, Bill." And away went the two men in blue.

"A couple of scoundrels," muttered Señor Robinson. "They are paid to keep the law, and they only think how to fill their own pockets. Let us make a start."

Now this rencontre with these two policemen, trifling as it may appear, caused several subsequent misfortunes. Titicaca's load had been clumsily packed, and insecurely fastened on his back. The result was that before we had travelled half a mile it gradually swayed over to one side, and then fell off. Titicaca plunged and reared, and gave vent to the most extravagant demonstrations of delight. His gestures seemed to infect his comrades, who had hitherto been quite well-behaved, with treasonable views. They grew very restive and impatient during the delay that occurred while Titicaca's load was being repacked and replaced on his back. And now a fresh cause of disturbance appeared. Suddenly we heard the sound of approaching wheels, of loud laughter, and of discordant music. In a few moments a cloud of dust became visible, and out of the cloud of dust there successively emerged three shabby-looking open carriages drawn by four horses each. The horses' heads and the drivers' coats were ornamented with white satin favours, and the same ornaments were worn by the occupants of the carriages, who, with the exception of two ladies, were all of the male sex, and all carried bottles in their hands. In the first vehicle, which was the state carriage, appeared a tan-faced digger in a bran-new plaid jumper and corduroy trousers; by his side sat a bold-faced lady with her bare hands all sparkling with rings, and a brilliant-coloured shawl wrapped

round her shoulders. These were the bride and bridegroom. A lucky digger had got married, and he was now scattering a few ounces of gold in entertaining his friends and driving about the neighbourhood of Melbourne. In the last carriage there were a fiddler, a trombone-player, and a little old one-eyed man who performed on the bagpipes. The united sound of these three instruments, added to the shouts and laughter of the wedding-party, was too much for the nerves of our lately-caught New South Walers; Titicaca gave the signal of revolt by suddenly tossing his head, and jerking the halter out of Tom Harvey's hand; the others followed his example, and a general stampede ensued. Señor Robinson, who was busily replacing Titicaca's burden, received a severe kick in the stomach, which laid him prostrate. Prawle threw himself on Gamboge's back, hanging over, with his head on one side and his heels on the other, as if he had been part of the pack; Miss Lucy having freed herself from my control, ran to the nearest gum-tree and began to rub her burden against it till she had worn a hole in the bag of sugar on which I hoped to make a profit of two hundred per cent. Suddenly Señor Robinson raised himself from the ground, jumped on Coalscuttle's back, and went in quest of the fugitives. After half an hour's exciting chase he brought down both Titicaca and Lucy with the lasso. He then said sternly, "Titicaca is the cause of all this mischief; he must be punished." We were curious to see the nature of this punishment. It was after this manner: Having put a bit in Titicaca's mouth, and a bridle over his head, the Señor fastened the end of his lasso to the bit, and taking up his position on a level piece of ground with the other end of the lasso in his hand, he lunged him round and round, administering merciless blows with his heavy whip whenever the horse showed any signs of slackening his pace. After half an hour of this exercise, he paused, and, gathering up a handful of dust, forced open Titicaca's jaws, and crammed the unwelcome dose into his mouth.

"I have made him eat dirt," cried the Señor triumphantly. "He is punished enough."

Titicaca now became as meek as a lamb, suffered his load to be replaced on his back, and took his place in the line of march with perfect docility.

"Titicaca will never forget that," the Señor afterwards observed. "It is the greatest disgrace you can inflict upon a horse. See how he shrinks when I go near him."

The Señor was full of superstitions, derived both from the East and West. For my part I am inclined to think that Titicaca trembled

because he had been flogged so severely, and that the dirt-eating ceremony made very little impression upon him—but I may be wrong.

We now travelled onwards for some time without meeting with any serious mishap. Still, our progress was but slow. The country was in a transition state from its winter to its summer aspect. On elevated spots the road was dry and dusty ; in the hollows it was up to the horses' hocks in stiff mud. Owing to the perpetual jolting, the packages became disarranged, and a halt was proclaimed at frequent intervals for the purpose of tightening straps, and so forth. In this manner the day began to wear away, and, though we had not marched ten miles from town, the sun was already approaching the western horizon.

Tom Harvey, though a new chum, had a keen eye for a convenient camping-ground. Besides, his black horse, Coalscuttle, was the swiftest and most docile of our team. Señor Robinson, with the intuitive genius of a commanding officer, had by this time made himself master of our strong and our weak points. So he said,—

"Mr. Harvey, before another hour we must camp out for the night. Be kind enough to push on ahead, and select a suitable place."

"All right, Captain," replied Harvey, and, changing his pace to double-quick time, led the good-tempered Coalscuttle forward at a brisk amble.

Although we were so near a large city, the country around us was uncultivated and uninclosed. At present, Melbourne, like most other cities, is surrounded by a wide belt of cornfields and market-gardens ; but in those days, those spots only were cultivated which lay on the banks of permanent streams, or which were of exceptional fertility ; all the other settled districts of the colony were devoted to sheep and cattle runs. The region which we were at present traversing was rather bare of trees. We were descending a long, low hill, at the bottom of which was to be seen a belt of scrubby bushes, while on the other side a gentle undulation appeared, entirely devoid of timber. Consequently, as soon as Harvey had traversed the narrow belt of scrub at the bottom, we naturally expected to see him and Coalscuttle reappear upon the rising ground in front of us. But neither horse nor man became visible.

"I wonder what he's stopping for?" asked Jemmy Wallington.

"Giving Coalscuttle a feed, I expect," answered Prawle.

"He has most likely chosen that patch of scrub for a camping-ground," said the Señor. "There is sure to be water there. But I should like to push on for another hour. Coo-ey !" he shouted.

Some seconds elapsed before a faint "cooey" reached our ears in

reply. It seemed to proceed from the bowels of the earth. We pushed hastily forward till we got among the scrubby bushes at the bottom of the gentle declivity down which we had travelled. We then perceived that our further progress was temporarily arrested by a deep gully. Now, an Australian gully needs a brief description, because I am not aware that anything exactly like it is to be found in this country. But everybody has seen those deep cracks which occur in fields where the soil is stiff and clayey, during a dry summer. The Australian gullies resemble these cracks on a gigantic scale. They are sometimes fifteen or twenty feet deep, and not more than six or eight feet wide at the top. In the winter, or after heavy falls of rain, a torrent of turbid water rushes along their bottom, but towards the end of summer they become perfectly dry. As our journey took place during the medium season of spring, a stream of water, some six inches or a foot deep, was running along the bottom of the gully, and in this stream was sitting our friend, Tom Harvey, with a very disconsolate countenance, washing away the blood from a cut in his forehead. Everybody eagerly shouted out, "Are you badly hurt, Tom?" and "How came you down there?"

"I'm not much hurt," he answered, "only a scratch or two. I'll reply to your other question when I've climbed out of this abominable pit. The sides are as steep as a chimney."

Presently Tom found a place where the sides were more sloping, and contrived to scramble out.

"Where's Coalscuttle?" demanded Señor Gonzales Robinson, the moment he reached the bank.

And this was Tom's reply:

"I jumped over the gully quite easily at a spot where the sides were completely overhanging, and where the chasm was not more than four feet wide. I was still holding Coalscuttle's halter, and encouraged him to jump likewise. He made a spring very obediently, but he did not leap as I should imagine he ought to have leapt. Perhaps the load on his back, or the halter, bothered him. At any rate, his hind feet alighted close to the edge of the chasm; the soil gave way, and he slipped backwards into the gulf. I fell upon him, but luckily rolled clear of him. You'll find him some distance above here. I worked my way down stream, in hopes of finding some means of getting out."

We found poor Coalscuttle in a melancholy plight, moaning piteously.

He was literally jammed, head and stern, across the chasm, at a distance of about five feet from the surface, and about ten feet from the bottom of the gully. Señor Robinson, having made one end of his lasso fast round the root of a prickly mimosa bush, fastened the other end

round his waist, and bade us lower him cautiously down. Of course, during this interval we had clapped the hobbles on the other horses. We lowered the Señor down, till he reached the level where Coalscuttle lay. He then proceeded to make a careful examination, removed the pack from the horse's back, and passed it up to us.

"Enough," he said, presently. "Lift me out." We did so. "It is as I feared," he said: "his near foreleg is broken. We can do nothing for him. It is a thousand pities, for he is our most useful horse. Better put him out of his pain at once."

"Can't we pull him out?" asked Tom Harvey.

"We could, if we had three upright pieces of timber on which to rig a windlass. But it would occupy half a day, and what would be the use of a three-legged horse? We could not take him with us, and if we left him behind us, he would die in agony from slow starvation. There is but one cure for his complaint. It is this."

As he spoke he deliberately drew one of his pistols from his belt, cocked it, and held it at about six feet from the doomed animal's head.

He pulled the trigger, it snapped, but there was no report.

"Poor old Coaly," muttered Prawle, "I'd really begun to grow fond of you. Had it been that vicious yellow scoundrel of mine, I should not have cared so much."

The Mexican replaced the defective percussion-cap by another, and again pulled the trigger. A flash, a cloud of white smoke, followed by a convulsive start, and a hollow groan. When the smoke cleared away, we saw to our surprise that the dead horse had sunk to the bottom of the gully. His death-agony had wrenched him from the chasm in which he had been imbedded. He now lay partially covered by the water, whose clear stream was discoloured by his ebbing life-blood.

"Young gentlemen," said the Mexican sternly, "when you have looked upon the faces of as many dead men as I have, you will not stand staring at the carcase of a dead horse. Come, we must turn to, and put up the tent at once. The sun is setting, and setting, too, in a bank of clouds, which promises a dirty night."

Upon hearing these words, we set to work with a will, and in a few minutes had the tent pitched in as sheltered a corner as we could find, under a canopy of mimosa-bushes, for the wind was already beginning to howl ominously. Harvey lighted the fire—not a very prosperous one, for there was no timber at hand larger than small sticks and twigs, but it was big enough to boil a "billy" of water, and to fry a beefsteak for our supper. We were all uncommonly sharp-set, for we had had a laborious and exciting day, and we had eaten nothing since our early breakfast.

But just as the water in our billy was becoming blood-warm, and as Harvey was preparing to scald out the frying-pan—just at this important juncture, the air grew dark, partly from the shadow of approaching night, but more because a dense canopy of threatening clouds had covered the sky. At the same time the wind increased in force, bringing with it some heavy drops of rain.

"I say, Prawle," said Harvey, "do you want any tea to-night?"

"Tea? I should rather think I did. And beefsteak too. Why, with the exception of breakfast this morning, to-morrow will be the third day since I have tasted food."

"Then I'll tell you what some of you fellows must do. You must hold a jacket over the fire, to keep the rain off, while I cook."

"Willingly," cried Prawle, suiting the action to the word, by stripping off his outer garment, and exposing himself to the rain, which was pouring down in torrents.

"O yes! O yes!" cried old Daddy Longlegs, who never missed an opportunity of raising a laugh, "this is to give notice that John Prawle, Esquire, formerly of Goree Piazzas, Liverpool, but now of the wild and trackless Bush, Australia Felix—oh! ain't it Felix, mates?—is about to martyrize himself for the benefit of the community at large, by exposing himself to rheumatism in the small of his back. Permit me to ask an important question, Monsieur Alexis Soyer," he continued, addressing our cook—"Is Sukey beginning to sing yet?"

"Her name is Billy out in the colonies," observed Lively Jemmy.

"Yes, old boy," answered Harvey, "Billy is beginning to sing most melodiously, and in five minutes more, if you hold the jacket as well as you're doing now, he will attain the boiling-point."

Alas for Tom Harvey's sanguine anticipations! At that moment a tremendous blast of wind, exceeding in violence anything that we had hitherto experienced, came roaring down the sides of the hill. As soon as it reached us, it nearly blew old Prawle off his legs into the fire, and, what was worse, it blew the jacket which he was holding completely out of his hands, just as a furious puff of wind at sea blows a sail out of the earings. Misfortunes never come singly, says the old proverb; at the same moment Tom Harvey, making a sudden dash to catch the precious garment as it flew past him, kicked over the kettle, spilt all the water, which was just about to boil, and put the fire nearly out. The flood of rain which followed this tornado soon completed its extinction. But the wind did worse harm than this. I had just been giving each of the horses in succession a feed of oats after their day's work, when as I was returning towards the tent, almost unable to keep my legs, I

suddenly saw our flimsy tent fly up in the air, and split into ribbons. We were now almost shelterless; but we did all we could to prevent further damage to our stores and provisions by unrolling our blankets, and stretching them across the mimosa-trees. For two hours after this the rain streamed down in a gloomy and incessant deluge. That we were all wet to the skin was a mere trifle; it was a far more serious matter that my beloved bag of sugar was turned to the consistence of treacle. As for the loaves of bread which we had brought up from town for our own eating, they were saturated with water like so many sponges.

"What is to be done?" at length asked Jemmy Wallington, as we all stood crouching in a heap under the sorry shelter afforded by our soaked blankets. "We are all as hungry as hunters, we can't make any tea, and I don't think we're quite savage enough to eat a raw beefsteak. What's to be done?"

"We must make our supper," answered the Mexican, "on bread and water, flavoured with a little brandy."

When I used to sit on a blazing hot summer's day in the dusty old schoolroom at Harlington poring over my Latin exercise, and every now and then glancing out of window to catch a glimpse of the glittering sea, I used to think how delightful it must be to live perpetually in the woods in some region where Virgil and Homer had never been heard of, where the Greek grammar was unknown, and where there was no cane except the sweet juicy sugar-cane. But when indulging in these day-dreams, I was apt to forget that even in those delicious woods the weather was sometimes very unpleasant, and that there were times and seasons when the despised schoolroom at Harlington would be a very agreeable refuge. These thoughts came into my head now, as I sat squatting like a frog on the damp and oozy earth with a corner of our tattered tent over my head, munching a lump of bread which was perfectly saturated with water, and drinking cold brandy-and-water out of a pannikin, into which the rain-drops splashed even while I was conveying it to my mouth.

We had no fear of being visited by horse-thieves on such a night as this; for dishonest persons have quite as much objection to getting wet through as anybody else. Besides, the night was very dark, and we had no light to attract the attention of passers-by. Accordingly, we left our nags to look after themselves, and found that they remained perfectly quiet, standing during the most violent part of the storm under the shelter afforded by the mimosa-bushes. As for ourselves, notwithstanding the rain, we could have become very jolly if we had only had a fire; but being fireless, wet to the skin, and chilled to the bone, we

could not pump up a large supply of animal spirits. Prawle called upon Lively Jemmy for a song, and Jemmy began with the well-known bacchanalian ditty—

"Three jolly postboys were drinking at the Dragon."

But when he reached the chorus "For to-night we'll merry be!" his teeth chattered so painfully that he was obliged to desist. Prawle suggested that he had better try an Ethiopian melody, as an accompaniment *on the bones* would exactly suit that sort of song. Señor Gonzales Robinson sat very mum and quiet, for he was not a man much given to conversation. For a long time he was unable to light a pipe, and used up nearly a box of matches in endeavouring to strike fire, everything was so penetrated with wet; but at last he kindled a flame; and then we had the satisfaction of watching the little red spot of fire under his nose, and trying to fancy that it diffused a perceptible amount of heat among the assembled company. The Señor was ordinarily an extremely temperate man, but on the present occasion he managed to swallow a considerable quantity of spirits. For some time, however, it produced no effect on his outward behaviour, except to make him unusually silent and reserved.

By degrees the wind lulled, the rain ceased falling, and a few pale stars twinkled feebly through the misty canopy which covered the sky. All of us, except Señor Robinson, got up, shook ourselves, and began to beat our breasts with our arms after the fashion of coachmen and watermen.

"Come and look at the gully," said Prawle.

It was too dark for us to see much; but we could hear that there was a raging torrent of water sweeping along its channel. If the best swimmer in the world had tumbled in now, as Tom Harvey tumbled in before the rain began, no earthly power could have saved his life.

"I vote we light a fire," observed Lively Jemmy.

"A fire!" returned Prawle, rather scornfully. "Don't I wish we may get it! A ship's crew becalmed on the equator might as well say, 'Let us manufacture a hundredweight of ice.'"

"And so they could, with the aid of chemicals."

"Granted, my ingenious friend. But where are our chemicals for lighting a fire on such a night as this? Every twig is soaked with wet."

"What will you bet me," said Jemmy, "that in an hour from this time I don't have a fire big enough to roast a prize ox?"

"I'll bet you an ounce of gold—the first gold we dig," answered Prawle, courageously.

"Done, done."

And the two shook hands over the bargain.

"Now then," said Jemmy, "I've no time to lose. You come along with me, Scudamore, and bring your tomahawk with you. We're going to take an evening stroll together."

By this time the heavy storm-clouds had pretty nearly rolled away, the wind had subsided to a calm, and the stars were shining more brightly. So, although it was rather a dark night, surrounding objects were not altogether indistinguishable.

"The success of my bet," observed Jemmy, as he led me swiftly along, "depends on my finding something. I noticed the said something as we came along this evening, and I must try and discover it again."

Every time that we came near a tree, Jemmy went up to it and examined it carefully; but on each occasion he returned saying rather dolefully,—

"It won't do; I shall lose my ounce of gold."

At last, when we had got to a distance of about half a mile from our encampment, Jemmy ran up to a big tree, and exclaimed joyfully, "This is the jockey for me! Bring your tomahawk, Stephen. Now then," said he, "I've been a few days longer in the colony than you and Prawle, and I'll tell you a useful wrinkle which an old chum taught me before I left Melbourne. You see this tree; it is called a stringy bark. I'll show you why." He pulled off a piece of the outer rind as he spoke, and pointed out that between this rind and the actual body of the tree there was a layer of a fibrous substance, several inches thick, strongly resembling oakum. "No matter," said Jemmy, "how wet the weather may be,—these trees wear Nature's waterproof coats, and the lining of their jackets is always dry. This inner bark will burn like so much tinder. We'll astonish old Prawle before the night is over."

Accordingly, with the tomahawk we cut off as much of the stringy bark as we could conveniently carry, and then returned to our desolate camping-ground, which we should not have found so easily if Prawle had not very considerately kept up a continuous cooeying, "like a jolly old barn-owl," as Jemmy expressed it.

"Now," said Jemmy, "I promised to have a big fire in an hour's time, but I didn't promise to gather the wood for it. You, Tom Harvey and Jack Prawle, must go and collect all the timber you can find. There are plenty of dead limbs lying on the hill yonder. Off with you at once: we don't want you to see our magical processes. Is the Señor still asleep?"

"Fast as a church, under the blankets," answered Tom Harvey. "I

suppose he's accustomed to this sort of fun, and can sleep wet or dry. I can't." And with these words he and Prawle departed in search of firewood.

With the aid of the stringy bark it was very easy to light a fire, provided we could find a dry lucifer match; for we did not possess a flint and steel, though the latter, in thinly-peopled countries, are much safer to carry than the best of congreves; because, if your lucifers get wet, you can't buy any more.

First, Jemmy "teased" out two or three handfuls of the stringy bark as fine as possible. He then attempted to strike a light. Señor Gonzales had been so wasteful over his pipes that we had only seventeen matches left. Jemmy scratched fifteen of these, one after another. They all either refused to ignite, or went out with a feeble sputter the moment after being lighted.

"I begin to feel very nervous," said Jemmy. "I don't care for losing the ounce of gold, but I don't like to be beaten. We've only two chances left. Here goes!"

"Hurrah!" The sixteenth match kept alight just long enough to set fire to the handful of "teased" bark which I held. It was especially lucky, for we afterwards found that the seventeenth match had lost its chemical head. I placed the burning mass on the ground upon the spot selected by my mate, and cautiously added more bark. The flame mounted steadily, gained strength, and gave out a grateful heat. We now added a bundle of slender twigs. They were very wet, and for a minute they smouldered and struggled, emitting a dense white smoke; but presently, aided by fresh supplies of bark, they burst into flame. We next ventured to pile on some branches as thick as a man's finger. They were a long time catching, and we used all the rest of our precious bark in enabling them to take fire. But by this time Jemmy pronounced our experiment to be successful.

"We only want wood, and we'll roast the prize ox I talked of. Hurrah! here they come, loaded with timber."

"Well," cried Prawle, "I must confess myself licked. If you're not the Wizard of the North, Jemmy, you must be the Wizard of the Antipodes. My ounce of gold begins to look foolish."

"Don't talk," answered Jemmy, "but cut away as hard as you can, and fetch more wood. You'll find this modest little fire of mine to be what the penny-a-liners call 'a devouring elephant' presently. Away with you, and you too, Scudamore; I'll stop and feed the fire."

Prawle and I returned in ten minutes' time, carrying a large twisted limb between us. It was as big round as a man's thigh.

"Is this too big?" we asked.

"Not a bit. Lay it on carefully. By the time you've made another trip you'll find it charred halfway through."

Jemmy was right. By the time we returned again a glorious fire was burning, throwing out such a glowing heat that we were obliged to keep at a respectful distance from it. Señor Gonzales Robinson had roused himself, or had been roused by Jemmy, from his watery couch; but the brandy which he had drunk and the unwonted warmth of the fire had combined to render him very drowsy, and, instead of displaying his usua soldier-like alertness, he squatted on one of the logs which Prawle had fetched, and looked, while in that position, uncommonly like a gigantic toad. Seeing that he was so lethargic, we determined to let our commanding officer enjoy himself after his own fashion, although there was enough work to do to keep everybody busy. All our wet blankets and the tattered remains of our unlucky tent were brought and spread out at a safe distance from the fire; the stores were examined, and those which had been wetted by the rain were placed where they would become gradually dry. As for our four nags, they all instinctively drew near the fire, and seemed inclined to become quite sociable.

Tom Harvey had already boiled a billy of water and made some hot tea, but we were sadly disappointed to find that there was no beefsteak for supper. During the confusion that ensued when the tent was blown to pieces, Tom Harvey left our meat on the ground, and forgot it, and, as it was now nowhere to be seen, we made no doubt that the native cats (mischievous little spotted creatures of the weasel tribe) had crept out of their holes as soon as the rain cleared up, and had run away with it. However, we contrived to make a very good supper, compared to the disconsolate meal with which we had begun the evening. We had plenty of hot tea, and we toasted our saturated bread. Señor Robinson roused himself when he saw supper ready. He ate some toast and drank a pannikin of tea; then he drank some more brandy, lighted a pipe, and began to troll out some lugubrious Mexican ditty with an energy that astonished us. His eyes twinkled, and his flat negro-like features became quite animated. Had he stopped with this display of exhilaration, all would have been well. But presently the animation extended from his face to his body and legs. He sprang from his seat and began to execute a sort of barbarous fandango. Not content with this, he caught up the gnarled limb on which he had been sitting, and whirled it swiftly round and round his head. He was enormously strong, in spite of his dwarfish stature, for this log of wood, I should think, weighed more than a hundredweight. Now, what demon had

entered into the usually staid and respectable Señor Gonzales Robinson I cannot conceive, unless it was the demon of Cognac, which had first rendered him sleepy, then noisy, and then mischievous, for suddenly, with a shrill cry, like that of an Indian war-whoop, he ceased his dance, and flung the tremendous club which he had been wielding, with all his force, right into the middle of Jemmy Wallington's roaring furnace. A million of brilliant sparks at once leapt into the air; the horses sprang aside and whinnied with terror; Titicaca was so frightened and struggled so violently that he pulled the pin which held him by main force out of the ground and darted away. Unfortunately we had not hobbled him this evening, the rain had come on so suddenly as to confuse all our arrangements, so Titicaca's legs were perfectly free, and in a moment he had disappeared in the surrounding darkness.

This unfortunate mishap seemed to have the effect of sobering Señor Robinson: he at once went in search of his lasso, and without another word, except when he muttered that, next to the unlucky Coalscuttle, Titicaca was the best horse he had, he jumped on the back of Topsy, Jemmy Wallington's brown mare, and started off in pursuit of the runaway.

(*To be continued.*)

"Tackling a Tiger."

NEVER shall I forget the excitement Jack Skilton's news produced. It was about 5 o'clock in the morning, and we were all seated in my verandah tranquilly enjoying our coffee and smoke. Blue wreaths from the fragrant weed curled gracefully upward, making a lovely contrast as they came against the warm glow overspreading the outward view. The light from the rising sun had already become sufficiently strong to cast great gleams through the scantier parts of the jungle immediately surrounding my bungalow, for in those days (twenty years ago) Moulmêin was not the place it has since become, and the thick tropical vegetation had been cleared for only a few paces beyond the outlying cantonments. It was one of those moments of tranquil enjoyment induced by a moderate coolness of temperature, and which is a luxury always hailed as one of the greatest a European can experience in the East. Although there was scarcely a breath of air stirring (for the tall and graceful palms were quite motionless, whilst the bananas and the broad-leaved plantains, the areca, and the sturdy bamboo were so perfectly quiescent that they might have been modelled in wax and standing under a glass case), the hour was, as usual, the freshest and pleasantest in the whole twenty-four.

In all countries just before sunrise the thermometer stands at the lowest; but perhaps in India this is more perceptible than elsewhere, and consequently the most is made of this early time of day. The stillness contrasted strongly with Skilton's sudden and noisy entrance; and until we heard what had given rise to this generally imperturbable young fellow's highly demonstrative behaviour, we were inclined to anathematize the ruthless way in which he was disturbing our dreamy state of

ease. But when he told us that a tiger during the night had made a raid upon our enclosures, and had carried off one of our fat stall-fed Bengal sheep, his excitement was very soon communicated to us all.

"By Jove!" he cried, "the cheek of the brute is rather too much! Why, Horton," addressing our doctor, "he must have gone under your verandah to get to the wall, and have sprung over from there, of course returning with his prey by the same way. Now, if I know anything about tigers, he is sure to try the same game again to-night; encouraged by his success, and his mouth set watering, he will want another tit-bit, and if we lie in ambush at your bungalow we are sure to get a shot at him; it is only a question of a little patience, and the fun will be quite worth it, and I shall have an opportunity of testing that new bullet. Why this will set us all alive; only don't you fellows go talking about it—keep it quiet—for five of us will be quite enough, and if we let it be known, we shall have the whole garrison up in arms and our sport will be spoiled. I have bribed our messman to keep his loss dark, so there will be no danger from that quarter at present."

After this, our indolent enjoyment was forgotten, and a general anxiety manifested about rifles and ammunition. Horton, however, as our doctor, was not as well prepared as the rest of us for such an emergency, and with the exception of his brace of holster pistols and sabre, had not an arm to his name. Although a tall, rawboned, powerful, but good-natured, indolent, easy young Irishman, standing six feet two in his shoes, he had never taken much interest in "shekar" of any kind. He was always much more given in his leisure moments to sketching and pursuing the picturesque; and though he had sometimes accompanied a pig-sticking or tiger-hunting party, it was always, as he said, as the artist of the expedition; and many were the skilful records he had made with his pencil of such scenes. Now, however, that there was a prospect of getting a pot shot from his own verandah, he looked upon the affair as very different. "Besides," he went on, "can't stand a tiger prowling round my verandah, that's rather too good a joke; why he must have passed within a foot or two of my head last night: tell me I snore like the deuce—perhaps he'll hear me next time, and take a fancy to me instead of a sheep; could easily smash in the thin partition that divided us. No: we must put a stop to his perambulations, and I should rather like the fun of having a 'go' at him. Who'll lend me a rifle? Don't all speak at once!"

And then followed a casting about for something to arm the doctor with; and this was not so easy as it might at first appear, without letting our little bit of sport become public property. Had he asked any of the

shooting men for the use of a rifle, of course there would have been a dozen at his disposal in an instant, but the unusual circumstance of Horton turning sportsman would have excited such an amount of curiosity that it would have been difficult to keep our secret, and it so happened that none of our party—Skilton, Gordon, Grant, and myself—had a weapon to spare, small arms of precision not being then the common articles they have since become.

Nevertheless, in the course of the day Horton appeared with an enormous fowling-piece, a sort of old-fashioned duck-gun with a flint lock, which he had borrowed from another brother saw-bones in the cantonment not more given to sport than himself, and who must have had it since the year one. We laughed heartily at his notion of shooting a tiger with it; but he said by loading it with slugs or some such bedevilments he should be able to give the "varmint" pepper! We advised him to try it, and there was a great deal of chaff about the danger of its bursting; but Horton was as plucky as he was high, had not an idea what fear really meant, and did not scruple to make some experiments with the piece immediately after getting it. It was not, however, more than once in every three or four times that it would go off. But we encouraged him by saying that it would come in as a finisher probably after our bullets had taken effect.

"All right," he replied; "I don't mind your chaff—warrant you, I'll astonish this sheep-stealing vagabond somehow. Come round to my bungalow, after mess, and we'll so dispose our forces as to give the gentleman a warm reception. I have examined the ground, and can see plainly, by the track of blood, the very line he took. As Skilton said, he came right under my verandah, and, as he is sure to take the same road again, guided by the scent of the poor devil of a sheep's carcase, we shall have to blaze at him as he passes through my compound."

Amongst our set there was, throughout the whole day, an absence of that repose which was the ordinary effect of the extreme heat and the indolence of our lives. The Briton's inborn love of sport was too much for us, and it kept bubbling up every now and then, in a way dangerous to the preservation of our secret.

However, nine o'clock found us at Horton's quarters, armed and fully prepared for action. We took up our position in the verandah, which, as you know, runs round the bungalow supported on poles, at about four or five feet from the ground, and is reached by a flight of steps. Here, lying flat down in a row, we could command the approach from the half-cleared jungle to the compound, and it was decided that we should let fly at our enemy the moment he entered the latter, as he

would then be within such range as to make our bullets tell with deadly certainty. At any rate, out of the five guns, it was concluded that, of a surety, two or three would take effect.

Thus, then, we disposed ourselves, Horton forming the left flank of the attack, and here, for several mortal hours, we had to wait. Lying within arm's length of each other, we determined that he who should first become aware of the tiger's approach should communicate the fact by a gentle pressure on his neighbour's shoulder, which signal was to be passed along the whole of our line. Aim was then to be taken, and a volley fired in regulation time; the necessity for speaking would thus be obviated, and every chance of scaring off our prey avoided. This tongue-tying was the severest part of our watch, and so irksome did it become at last to Horton that, after shifting and fidgeting a great deal, he finally gave evidence by a heavy breathing, which soon culminated in a snore, that his enthusiasm for the sport had not been sufficient to keep him awake, and several times we had to arouse him, lest the row he made should frustrate our plans.

Watching and waiting in this darkness and silence (a silence which seemed to reign in spite of the monotonous croaking of the bull-frogs, the intermittent cries of the hyena, and howl of the jackal, the distinct utterance of the tock-too, the occasional scurrying of rats in the roof, and, above all, the low moaning tones of never-ceasing tom-toms in the distant bazaars, where the native carries on his midnight orgy), our anxiety increased every minute. Would the brute disappoint us after all? should we have our trouble for nothing? and, when he came, should we be able to distinguish and hit him? were all questions which naturally succeeded each other in our minds; and nothing but the irrepressible desire for excitement could have restrained such restless spirits for so long a time.

At length, just as Horton had recommenced another sonata on his nasal organ, the slightest perceptible sound, as of the breaking of a small twig or crackling of a fallen leaf, succeeded by the merest suggestion of a stealthy cat-like tread, at no very distant point in the underwood, reached us, and the eyes of all were eagerly strained to catch a glimpse, through the blackness of the night, of the animal whose approach we knew instinctively these sounds heralded. They could be heard somehow, in spite of the variety and conglomeration of the noises above enumerated, which, breaking upon the stillness, nevertheless merged, as it were, into one continuous murmur, much as the surging of the sea does upon a sandy shore, without rendering inaudible such slighter tones as whispers and gentle footfalls in one's immediate neighbourhood.

The doctor's confounded snoring was reaching its climax, and we all felt terribly anxious lest it might arrest the progress of our quarry. For a moment doubtless it did so, for we were distinctly sensible that the beast once or twice halted, as if listening. Nevertheless, Skilton, who was lying next the sleeper, now wisely abstained from arousing him, in case some exclamation might be even more dangerous than his monotonous grunting. It was a moment of great excitement and expectation. We held our breath, as, for a time, all token of the animal's progress entirely ceased. We guessed that the small space of open ground was now being crossed. Then a pressure came upon my shoulder, and, simultaneously, I was conscious of (I can hardly say I *saw*) a dark, mysterious, dusky form, looming large, within a few paces of the verandah steps. My rifle, already in position—for we had so adjusted ourselves as to make much motion unnecessary,—was slightly elevated, and the next instant a furious report rang through the night. We had fired a most perfect volley, and were upon our legs in a second.

Of course Horton was the last to rise, having been awakened only by our firing; but, being instantly conscious of what had happened, and, I suppose, feeling chagrined at being behindhand at the critical moment, had no sooner gained his feet than he dashed right down the steps, almost before we could realize what he was doing.

We half followed into the darkness—followed quickly enough dimly to perceive that he had come into close contact with the brute itself. Some one raised a cry for lights, which had been prepared by our servant in an inner apartment; but before they could arrive I distinctly saw Horton within the clutches of the wounded tiger, who was now roaring savagely.

There was a wavering motion at the foot of the steps; man and beast were strangely confused; then they seemed to separate,—and a flash and report told us that Horton had fired. Lights arriving at this instant, a ray fell upon this battle-field bright enough to show the doctor aiming a blow with the butt-end of his gun at the head of the half-crippled animal, just as it was springing towards him with one paw raised. The stroke taking effect on the side of its head, it reeled over, but, in doing so, a desperate lunge from the one uplifted claw caught poor Horton by the face, and pulled him headlong once more into horrible proximity with the tiger. Again they appeared to roll over and over. Two of us by this time had reloaded our pieces, but we dared not of course fire, for fear of hitting the doctor. The suspense of the next minute was frightful; and as we stood in agonized irresolu-

tion how to act, a sudden cessation of all motion, not less ominous or terrible than the deadly struggle, absolutely paralyzed our very thoughts.

At last, rushing down the steps, we were soon somewhat relieved as to the dread issue. Horton was lying senseless and bleeding, one side of his face terribly mutilated, and his body apparently crushed under the carcase of the now harmless brute. Our servants, by this time seemingly convinced that the tiger was dead, no longer hesitated to aid us in dragging him away from the body of our poor friend, who, once again within the bungalow, soon showed, under the effects of the restoratives administered, signs of returning vitality.

Our volley naturally roused the whole cantonment, and medical aid was not long in arriving.

Horton suffered, and is disfigured fearfully; but in time he recovered completely. The tiger's skin always forms a conspicuous feature now in the furniture of his quarters, the imperfect left paw, and a terrible rent in the soft fur in the region of the heart, showing that the death-wound was caused by the fury of the point-blank discharge from the old flint-lock duck-gun.

The first night Horton reappeared at mess he received quite an ovation. He stated his intention for the future of "going in" for tigers; "having," he said, "tasted blood, as it were, a fellow can't stop, you know!" And, in proposing his health, the colonel (an inveterate punster, and whose pronunciation of French was indifferent), whilst wishing him every success, said, "Of course you are quite right to 'go in' for shekar now, since in this case you have come off with such 'a-claw'" (*éclat*).

Velocipedes.

THE ART OF VELOCIPEDE MANAGEMENT.

WHEN practice has given a tolerable command over the vehicle (and a young, active man will acquire that command in a fortnight's practice of a couple of hours a day), the legs may be elevated to the rest when the velocipede descends a hill, so that it may run free. The preliminary position of doing this is shown in fig. 16.

Fig. 16.—Preparing to go Down Hill.

The right leg is raised on to the cross rest beneath the angle, whilst the hands firmly grasp the handle. A slight effort will raise the left leg to the other side of the rest (fig. 17). The velocipede will run now

Fig. 17.—Off Down Hill.

down hill by its own gravitation, whilst the rider controls its movements by the aid of the brake. It requires but little practice to perform this feat adroitly. In fact, the greater the speed the more perfect the balance.

In all early efforts the ascent of a hill should be avoided. It is very discouraging to the learner, and causes him to lose confidence in himself and his vehicle. When perfect command is obtained over the velocipede, comparatively steep hills may be ascended without much difficulty. Old velocipedists all affirm that it is better and wiser on long journeys to walk up the hills, for there is a much less expenditure of power in walking up the hills and leading the bicycle, or even pushing a four-wheeler, than in attempting to force it along by means of the treadles.

With respect to the command over the velocipede, I have seen comparative beginners, in the course of a month's practice, describe a series

of circles or a figure of eight with ease. It is by no means impossible to turn a circle at full speed a little more in diameter than the length of the machine itself.

One of the objections made to the use of the bicycle is that a slight impediment would cause it to overturn; but practically this is not the case. A recent velocipede steeplechase at the gymnasium at Liverpool showed that the bicycle could perform wonders, going easily over large thick mats and planks spread about without upsetting the riders; as many as three mats were cleared at one time in excellent style. During this race Mr. Shepherd, one of the velocipedists, mounted on to the narrow seat, and balanced himself on one foot whilst the bicycle was going at a rapid rate. The vehicles used were the strong iron ones manufactured by Mr. Brown, of Liverpool.

How to Construct a Bicycle.

However popular and however common velocipedes may become, there will always remain a large section of the people to whom they will be and must be inaccessible, in consequence of their price. At first sight there seems no reason why so large a sum should be charged for them. The lowest price quoted, as far as I have seen, was 35s. for a tricycle adapted for rural postmen, by Mr. Lisle, of Wolverhampton. For a well-built bicycle the lowest price yet quoted is £7. 7s., though the advertised prices range from £10 to £20. Bicycles have been sold in America as high as 200 dollars, with ivory handles and ornamental platings of silver. In Paris they are sold at all prices, from 200 to 400 francs. Vélocipèdes de luxe, such as that presented to the Prince Imperial, mount up to any sum, according to the amount of rosewood, carving, and aluminium bronze used.

Then there are numerous etceteras sold. Valise, lantern, oil-bottle, or grease-box, spanner in case of the machine getting out of order, or india-rubber cushions for the iron cross-bar in front of the bicycle, on which the feet rest when going down hill. A cover, too, is wanted for the vehicle to preserve it from dust, and some add an indicator to mark the distance travelled.

This sum is larger in consequence of the liability of the bicycle to rough usage and accidents. The best material must be used in their construction, or the result will be failure. Every piece must be made by hand, of wrought iron, steel, or brass. Cast iron has been used and failed. It was dangerous to the rider, and pecuniarily fatal to the manufacturer. In large manufactories a variety of artisans are employed. One of the great American manufactories "employs draughtsmen to

design improvements, pattern-makers to prepare models for the foundry, blacksmiths to do the forging, wheelwrights for the wheels, machinists and fitters to turn and fit the various parts, foundrymen to cast the pedals and traces, boltmakers to make the rivets and bolts, saddlers to prepare the seats, and painters and varnishers to finish the machines for the ware-room." Still it is possible for any ingenious mechanic to make one for himself, if he attends to the dimensions and directions herewith given.

The Wheels

are of course the principal portion of the vehicle. They have been advertised at 30s. the pair when made of iron. Good hickory wheels with steel tires cost more than that sum. The iron ones would probably prove as lasting.

The driving-wheel should never exceed 36 inches in diameter. An ordinary-sized man would find 30 inches high enough, for the pedals may be graduated on a slide to suit the length of leg and stride required. The height of the saddle should always admit of the feet being placed on the ground. This enables the rider to rest when tired in an easy position, and gives him power to preserve himself from many an ugly tumble in the beginning of his career.

The dimensions of a full-sized French velocipede are various. If the driving-wheel is 36 inches in diameter, the rear wheel should not exceed 32 inches, and it is better to have two of 30 inches, so that it may be converted into a tricycle. The length between the centres should not exceed 44 inches. The rear wheels should run free on a fixed axle. The axle of the driving-wheel is either a part of the iron wheel, or keyed on to it, fitted with either square nuts or ornamental caps to keep the pedal-stays firmly in their places.

An exceedingly useful size, perhaps the most useful, is to have the driving-wheel 30 inches in diameter, and the rear wheel 27 inches. The length between the centres would then be 30 inches.

Some additional strength is secured by placing the spokes on the nave stock alternately on one side and the other of the centre, as shown in fig. 18. By far the cheapest plan is to buy a pair of tubular iron wheels.

If, however, it is more handy to procure wooden wheels,

The Axle

will have to be considered. It should be made of bar steel, one inch square, and keyed into the wooden nave with flat keys, or, what is better,

a flat plate may be screwed on either side of the nave, with a square hole to fit the axle. The first inch of the axle outside the nave must be rounded to receive the fork. The next inch should be left square to receive the crank (fig. 20), which may either be secured by an ordinary linch-pin as at A, fig. 18, or by a screw and nut as at B. Another plan may be followed which has many advantages. The wheel may

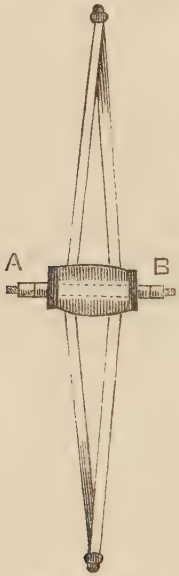


Fig. 18.

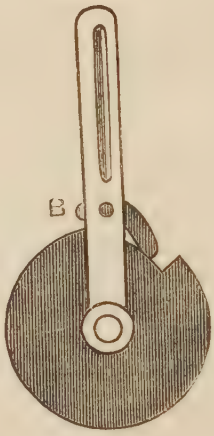


Fig. 19.

Fig. 20.

be left free on the axle as in an ordinary carriage, and on the outside of the nave a strong iron plate, fig. 19, may be screwed, working with a ratchet-catch, B. The crank arm will then run free when descending an incline. This modification is far better adapted for a treadle bicycle than for a bicycle, and can only be recommended when the nave of the wheel needs strengthening. As the rear wheel runs free on the axle, it may be secured by a simple nut and screw on each side of the reach-fork, or by a linch-pin.

The Crank-Shaft

is shown at fig. 20. The groove or slot enables the crank-pin bearing the pedal to be adjusted to any length required. It may be made of $\frac{3}{8}$-inch iron. The groove or slot should be $\frac{3}{8}$ inch wide, and the width of the crank should be $1\frac{1}{2}$ inch, as the strain is very great.

The Pedals

or stirrup are made of various shapes; those in the form of a slipper are now almost universally discarded in favour of the two varieties shown in fig. 21. The first (A) is a three-sided wooden pedal with a circular brass flange turning freely on the crank-pin. The pressure of the foot will always bring one of the sides into proper position. They are so shaped as to allow of the use of the fore-part of the foot, bringing the ankle-joint into play, relieving the knee, and rendering propulsion much easier than when the shank of the foot is alone used, as in the slippers. The pattern B, which is weighted so as always to present the same surface to the foot, has many admirers. They are adjusted on the crank by means of a nut and screw. A plain crank-iron without a reel may be used.

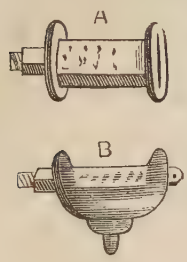


Fig. 21.

The Guide-Fork, or Brace,

is variously formed. The fork itself is half the diameter of the wheel, with sufficient play to let the latter run free. The bearing should be bushed with brass or composition metal. Thus, if the wheel is 30

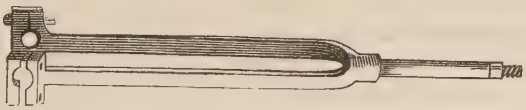


Fig. 22.

inches high, the fork would have to be 16 inches, and the shaft 9 inches. It should be filed square at the top to secure the fork of the steering-handle, and the upper part tapped to receive a nut.

The Steering-Handle

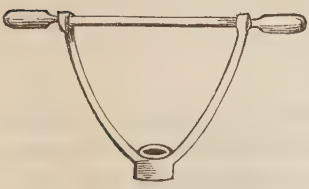


Fig. 23.

may be made of any fancy curve, a variety of which are shown in the engravings of the bicycles. A plain fork (fig. 23) will answer every purpose of use and ornament. The shaft of the handles should have a hole drilled to receive the brake-cord, if one is used, or an eyelet-hole may be welded on. The handles should be of wood.

The Reach, or Bearing-Shaft,

is the most important portion of the whole, for unless it is of good material and well made, no possible satisfaction can be given. The simplest made and the cheapest is that shown in fig. 2, but a handy smith would have but little difficulty in forming one similar to the

Fig. 24.

Hanlon Velocipede (fig. 6). A good stout ash bar is within the reach of every country and the majority of town lads; a cooper, joiner, or wheelwright (if the lad has no tools) would shape it into a form similar to fig. 24. It should be some 4 feet long, and 3 inches by two inches scantling. The bow carrying a collar, A, should be made of iron, and screwed to the bearing-shaft, to receive the guide-fork, and a brass collar should be let into the shaft immediately beneath for the same purpose, as shown by dotted lines at B. The two supports to the hind wheel, one on each side, should be of a V shape, as in fig. 25, so that they may be tightly screwed to the shaft. The arm might be lengthened at D on both sides, so that a pin or bolt could be inserted to support a steel spring for a saddle, the other end of which may be secured at C (fig. 24). Or,

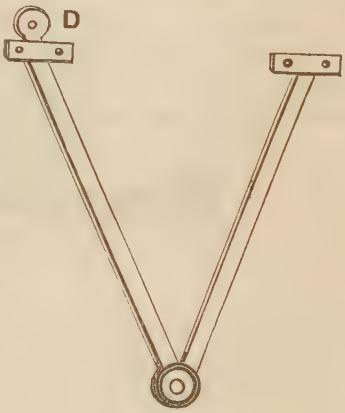


Fig. 25.

The Saddle

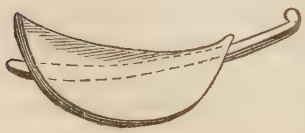


Fig. 26.

may be supported on two spiral springs, or by eighteen inches of steel spring bolted through on the right side of the shaft at C, in the shape of fig. 26. The saddle itself may be of wood, or stuffed with wool, and covered with leather or American cloth.

The Fitting must next be considered. The brace-fork must be fitted on the driving-wheel by screwing the caps to the flange and oiling it well. The crank-shafts must follow at right angles to each other, and the nuts screwed tightly home. The bearing-shaft or reach should now be placed on the fork. Ere this is done, a collar of india-rubber, or a coil or two of spiral spring, should be placed over the outside of the fork, between it and the shaft, to act as a buffer. If neither india-rubber nor spring be handy, a few pieces of leather and cloth will be useful to prevent the jarring of the machine. The steering-handle may be fitted on and screwed down. It may require a few iron washers or rings to come firmly down to the collar; but this must not be screwed too tight. The V supports may now be secured in their places by bolts being run through the screw-holes and secured on the other side with nuts, so that the work will be exactly parallel. This is better than the plan shown in fig. 2, of making the supports into forks, and bolting them through the wood. The first plan strengthens and the latter weakens the shaft. The rear wheel may now be placed. A strong but simple steel bolt, with a linch-pin or nut, will answer for an axle. Fit on the saddle, and your velocipede is complete, with the exception of the brake, which is hardly necessary; but, if desired, it can be screwed beneath the shaft, so as to act on the hind wheel, as shown in fig. 2. A piece of catgut, or even sash-cord, if knotted to the steering-handle and passed through a gimlet-hole in the shaft and attached to the end of the brake, will furnish sufficient power on the steering-handle being turned round. Fig. 27 shows the ordinary construction of a brake. It is made of iron, but the shaded part is wood, which will require renewing occasionally. Now you have a bicycle: ride, practise, and prosper.

Fig. 27.

(*To be continued.*)

Trades connected with Science and Art.

BY THOMAS ARCHER.

GLASSWORKING.

THERE is such an intimate connection between the manufacture of Optical Instruments and Glassworking that this in itself would be a sufficient reason for making some description of the trade of the moulder and blower of glass follow that of the optician. It may be said, indeed, that comparatively little advance could have been made in some of the most exalted sciences without the aid of instruments formed either of glass or crystal; and in the ornamental arts glass has held such a high place that it may be immediately associated with gold and silver work, as well as with engraving and the art of moulding by dies or sunk patterns.

Like many of the discoveries and inventions most useful to mankind, glass is spoken of and recognized in history without being connected with any one person as introducing it to the world. The time at which it was first invented is unknown, and Pliny, in his "Natural History," attributes its discovery to accident. Some of the mariners in a vessel laden with a cargo either of salt or soda landed on the banks of the river Belus, a small stream at the foot of Mount Carmel, in Palestine, and finding no stones on which to rest their cooking-pots, so that they might kindle a fire under them, placed them on some of the lumps or blocks of the mineral which they had on board. The heat of the fire partially melted the "nitrum" (it is not quite certain whether it was salt or soda), and, causing it to fuse with the sand on the shore, produced a liquid stream, which, when cooled, formed a transparent substance. Whatever

may have been its origin, the art of manufacturing glass was known in very early ages, and the Egyptians were certainly acquainted with it, since not only are beads coated with glass found in the mummy-cases, but pieces of blue glass have been discovered among the ruins of their ancient cities. The Romans obtained their glass from Alexandria, where the manufacture was at that time carried on; and utensils of glass have been discovered in the excavations at Herculaneum and Pompeii.

The ingredients of which glass is made are sand and either potash or soda, while, in some cases, litharge or vitrified lead is added, in order to make these substances melt more easily. Some other substances are employed, not only to render the glass itself more fusible, but to remove any colour, and produce complete transparency; for this purpose small quantities of arsenic, manganese, and borax are most generally adopted. Sometimes, in the coarser and commoner descriptions of glass, lime is used instead of potash, pearlash, or soda, and almost any alkali will answer the purpose; but in the finer sorts, such as best flint glass, plate glass, crown glass, and the superior kind of ordinary window glass, not only the alkali but the sand used should be of the purest description. The best sand—which must be free from colouring matter—is, in fact, what is called silex, or flint, and is brought from Alum Bay, in the Isle of Wight, from Aylesbury, and Reigate, while a large quantity of very fine sand is imported from America for the purpose.

The materials, together with a quantity of broken glass, called "cullet," are thoroughly mixed together, and placed in a furnace in a large crucible or pot. These pots require very careful construction, and are made of a peculiar kind of clay, mostly found in the coal-pits at Stourbridge. They are large enough to contain several hundredweight of glass, are built up piece by piece, and when they have been allowed to settle, are baked till they are fit to endure the great heat of the glass furnace; they are then ready for use. The material is placed in them, and they are built into a furnace, each pot being near a place which can be opened when the melting is complete—that is to say, in about forty-eight hours.

As we began by explaining the manufacture of lenses in our description of optical instruments, we will commence the present article by giving some accounts of the manufacture of those enormous lenses which are now used for lighthouses and other purposes.

The material from which optical glass is made must be perfectly free from impurity, and to insure this result a single melting often lasts five days, during which time the metal is constantly worked in order to clear

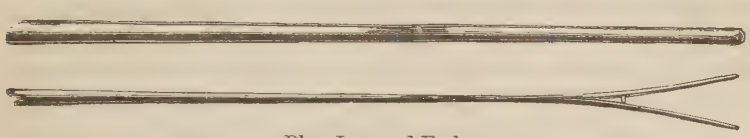
it thoroughly, and render it completely transparent. The whole mass is then allowed to cool, and is polished and sawn into pieces, which are again heated in a kiln or furnace, and afterwards moulded into discs of the required size and thickness for the lenses that are to be made. Only rough discs are supplied by the glassworker, the grinding and polishing being generally the work of the optician. Messrs. Chance Brothers & Co., who conduct one of the largest glassworks in this country, at Spon, near Birmingham, have manufactured discs twenty-nine inches in diameter, the largest ever produced, and valued at £1,000 each.

It is at the same factory that the enormous discs, prisms, and lenses used for the dioptric and other lighthouses are made and fitted to the gigantic iron frames prepared for their reception; and most of the operations in that department are performed by the aid of machinery. The lenses and prisms are first cast in iron moulds made in mathematical shapes, and are then placed on revolving iron tables, where they are fixed in frames, or rather beds of plaster of Paris, that they may be acted on by the friction of emery and rouge, and so become completely polished. The most delicate part of the manufacture, however, is the adjustment of the focus of each lens, an operation belonging not to the art of the glassworker, but to the science of the experienced optician.

We will now give some account of the method of manufacturing the ordinary descriptions of glass known as "crown" and "sheet" glass, and commonly used for windows.

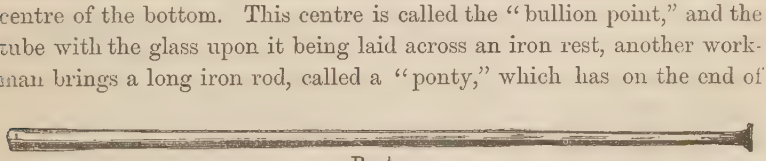
It requires some practice to be able to look into the red-hot glare of the furnace when the screen is removed from before the opening at which the workman has to stand in order to take the glass from the pot; and the glassworker is provided with a leathern hat and jacket, and frequently has his face protected by a mask. A small round hole in the iron screens permits each pot to be seen before the removal of the screen itself, which remains closed until the glass is in a fluid state. Floating on the glass in each pot is a ring of fire-clay, which has the effect of reducing the size of the surface from which the impurities that come to the top have to be skimmed, and also prevents the surface, which is liable to become stiff while the glass is being worked, from mixing with the lower portion, and so injuring the uniform density of the mass. When the glass is quite in a liquid state, the furnace is gradually cooled until the contents of the pots are a little thicker, so that they may be more easily worked. Then the "gatherer" advances to the open space from which the screen has been removed, and places the end of a long iron tube into the melted glass within the ring of fire-clay. By turning the tube

round and round he collects on the end of it a pear-shaped lump of glass, and long practice enables him to take up exactly enough for his purpose,—not all at once, but a little at a time, since it is neces-



Blow-Iron and Fork.

sary to take out the rod and let the first piece of glass cool a little in order to be able to take up more. When sufficient molten glass is collected at the end of the tube, the tube itself is cooled with water, that it may be freely handled, and the glass at the end is pressed or rolled backward and forward on a metallic table, called a "marver," until it assumes the shape of a cone, the point of which is held by the tube. While it is being rolled, a workman blows down the tube, and expands the glass at the end to a globular shape; it is then heated again in the furnace, and once more the workman blows down the tube till the glass is expanded to the size and shape of a Florence flask. The part of the glass which is like the mouth of the flask adheres to the end of the blow-pipe, and as this is to become the edge of the circular sheet of "crown" glass, it is rolled on the edge of the marver. Again the glass is taken to the furnace, re-heated, and expanded to a large globe, the spot opposite the end of the tube being afterwards flattened and its centre marked by pressure of a small iron cup. The shape is by these means changed from a globe to that of a large squat-shaped bottle, with the blow-tube at the neck and the lump made by the iron cup in the centre of the bottom. This centre is called the "bullion point," and the tube with the glass upon it being laid across an iron rest, another workman brings a long iron rod, called a "ponty," which has on the end of



Ponty.

it a lump of molten glass moulded into a kind of cup shape; this he firmly attaches to the "bullion point," and a piece of cold iron being quickly applied to the neck of the hot glass where it is joined to the blow-pipe, at once detaches it, and leaves it fastened to the end of the "ponty" in the shape of a flattened globe with an orifice at the point opposite to that at which it is held. The operator must now wear a mask, for he has to stand in front of a blinding red heat, that he may place the globe of glass in the furnace, at the same time whirling the

ponty much as a sailor whirls a mop to force the water from it. As the glass softens in the heat, the twirling motion, by its centrifugal force, expands and flattens the globe of glass more and more until the opening at the further side increases in size. Still the whirling goes on, until what was just now a globe looks like a great ring with a double rim; then, suddenly, the opening expands altogether, and in a moment what was the edge of the hole becomes the outer edge of the entire piece of glass, which has now assumed the shape of a wheel, or flat circular disc, of uniform thickness, except in the centre, where it is held by the ponty, at the "bull's-eye." This disc is then taken from the furnace and placed upon a support called a "whimsey," where it is detached from the ponty by shears, and is afterwards carried on an iron frame to the "annealing" kiln.

The object of annealing is to get rid of that brittleness which glass, and some metals, always have when they have been cooled suddenly after melting. An annealing kiln or oven is so contrived that the glass may be re-heated and then suffered to cool gradually, either by being removed to a chamber in the kiln of lower temperature, or by the heat of the kiln being slowly diminished. After the annealing process, which takes from one to two days, the tables of crown glass, which are about thirteen pounds in weight, are cut into sheets of the required size, the centre portions, containing the bull's-eyes, being of but little value except for garden-frames and out-houses, where they may frequently be seen with the lump in them which was once the centre of the great glass wheel.

Sheet Glass

is formed by taking the blow-pipe with the lump of melted glass upon it to a block of wood hollowed out in such a way that when the glass is laid upon it, and afterwards expanded by blowing through the tube, the shape of the bulb at the end of the pipe becomes cylindrical, or something like that of a great phial. The furnaces where these cylinders are re-heated are close to openings in the ground, something like long narrow saw-pits. After having heated the glass cylinder in the furnace, the workman stands on the edge of one of these pits, and lowering the long pipe swings it swiftly backward and forward; by this process the cylinder becomes elongated, and when it has attained the required length it is again heated, and by repeated blowing through the tube expanded to the required size. The lower end is then opened by means of blowing through the tube and then stopping it, so that the expanded air bursts its way through the weakest part,

which is always the bottom of the cylinder. This opening is widened by a circular whirling motion of the tube, and the cylinder is detached from the tube by the application of a piece of cold iron. The cylinder is then cut from top to bottom by a long-handled "diamond," such as is used by glaziers, and is afterwards consigned to the flattening furnaces, where it is laid on a flattening-stone covered with a large sheet of glass. The side cut with the diamond is uppermost, and the heat quickly opens the cylinder, which falls in a wavy sheet of glass to be flattened by the "polissoir," a wooden instrument something like the "peel" used by bakers for taking bread from an oven. The flattening stone, which runs on wheels, is then removed to another compartment of the furnace, where the temperature is lower, and by means of a flattening-fork is lifted to the cooling-stove, where it remains till the sheet of glass is stiff enough to be taken to the annealing furnace.

The best sheet glass has to be ground and polished, for, small as is the difference between the lengths of the inner and outer surfaces of the cylinder of glass, that minute difference is sufficient to cause a slight inequality of surface in the sheet. To remedy this, each sheet is laid upon a flat surface of leather, which is kept damp, so that it holds the glass by creating a vacuum, just as the toy called a "sucker," and consisting of a round piece of wet leather at the end of a string, will adhere to a paving-stone. Firmly attached to their leathern bed, two sheets of glass are placed face to face, with a supply of fine sand and water between them, and are then caused to move by machinery, so that the two faces are thoroughly rubbed and ground in every direction. The substance used for polishing is an oxide of iron, applied to the surface of the sheets on pads of woollen stuff.

Plate Glass

is, as its name implies, glass formed into plates by pouring it in a melted state into a shallow mould. Plates of glass may be made of very great size; and, as it is the most expensive kind, because of the number of careful operations it has to undergo, the very purest materials are generally used for producing it, consisting of the whitest sand, the finest soda, and manganese and cobalt for the purpose of discharging all colour from the other ingredients. It is only lately that plate glass has been used for the windows of dwelling-houses; it is principally in demand for shop-fronts, looking-glasses, and purposes where large and substantial sheets are required, of even surface and perfect transparency and regularity. In the manufacture of plate glass the melted "metal" is

removed from the melting-pot to a large vessel called a "cuvette," from which it is poured into an iron casting-table, the thickness of the plate being regulated by the height of iron bars which are placed at the edges of the table. Immediately after it is poured out, the melted glass is flattened, and equally distributed over the table by a metal roller which is passed over its surface. After being annealed, the plate is ground in a manner similar to that used for sheet glass, the substance used for grinding being powdered flint, and afterwards emery-powder. The polishing is effected by oxide of iron upon woollen pads. Plate glass is silvered for looking-glasses with an amalgam of mercury and tin-foil.

Flint Glass

is the name given to that kind of glass of which ordinary tumblers, decanters, and other articles for domestic use are made; and as this is the most extensive, so it is in some respects the most interesting, because it is the most artistic, branch of glass manufacture. It is also the most ancient, for, although the time of the first invention of glass is not recorded, and the art of glassworking has been ascribed to Egypt, Palestine, Nineveh, and Phœnicia, so that it certainly existed at least three thousand years ago, there is little evidence to show that the substance was used for windows at those early periods. Pictures, hieroglyphics, inscriptions, and the actual discovery of glass ornaments prove that the manufacture was practised and had attained considerable perfection. Even in Britain these ornaments were introduced at a very early period, as may be shown by the Glain Neidyr, or Druidical glass rings, which have been found at Stonehenge, and in other places; but though several panes of glass were discovered in the excavations at Herculaneum, the strange part of the matter is that the Romans used only a sort of "talc," which is a half-transparent fossil substance, for their windows; and window-glass was not introduced into England until between the seventh and eighth centuries, when, of course, it was only used for filling the windows of cathedrals, a work of which we shall have more to say presently, when we come to "Stained Glass."

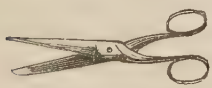
It is worth while to consider what an important trade glassworking has become during the last century. All kinds of articles are now manufactured either from flint glass or the coarser kinds of "metal," which has, to a great extent, superseded earthenware, and is desirable because of its resistance to the corrosion of acids, its purity and transparency, and the ease with which it can be cleansed,—as a material for dairy-pans, jars, cream-pots, syringes, pastry-slabs, rolling-pins, drinking-

vessels, garden-frames and forcing-glasses, fern-shades, churns, syphons, and even some parts of furniture, such as door-handles, cornice-poles, and the handles of domestic implements. Glass tiles and slates, as well as rough thick slabs to introduce into flooring for the purpose of lighting lower rooms, are produced in large quantities, while even as drain-pipes glass has been found serviceable where wood, stoneware, and iron were less efficient. Of course, the various descriptions of glass require different proportions of the materials employed in the manufacture. Good flint glass, however, contains about 120 parts of fine clean white sand, 40 parts of purified pearlash, 35 parts of litharge, 13 parts of nitre, and a very small quantity of black oxide of manganese.

It would not be easy to describe the process of manufacturing the various articles, such as decanters, wine-glasses, vases, urns, dishes, and the hundred other ornamental and useful objects made from glass, since the tools used are few and simple. The work is mostly done by the blow-pipe, which enables the operator to give the vessel required its first form; and the rest of the operations are dependent on the skill with which the half-melted material can be pulled, twisted, rolled, pressed, or cut into the required shapes, or separate parts joined to the main piece. It is the facility presented by glass for rapid and easy modelling which renders it so valuable in the plastic and ornamental arts. It may be easily understood that common bottles can be formed with the greatest ease by the blow-pipe, the ponty, and the table; and other things are formed either by dexterous twisting and shaping, or by means of moulds into which they are blown or pressed. The commoner descriptions of glass utensils are either blown or cast, and afterwards annealed in order to remove their brittleness. In the more costly and elegant examples of glasswork the glasscutter's and engraver's art is exercised upon them.

Mould.

The process of glasscutting, as it is called, may be illustrated by the operation of making the "drops," or prisms, for chandeliers, which are made of the purest and finest description of glass, the lumps of the material being heated in a furnace until they become soft enough to squeeze into moulds of the required shape. Before they are moulded every speck and defect is picked out with a pair of shears made for the purpose, for they must be entirely free from either mote or air-bubble. When they are moulded they are mere dull pieces of glass, and have to be converted into brilliant prisms: to effect



Shears.

this the rough edges of the glass are removed by filing, and then every "facet" is applied to an iron wheel, which revolves beneath a continual supply of sand and water dropping on its surface. This removes the first roughness, and the operation of cutting is completed by a disc of Yorkshire gritstone; this smooths and brightens the facets, so that the brilliant prism only requires to be polished at another lathe, where the wheel is of hard metal and is plentifully anointed with oil and rottenstone.

It is in a similar way that glass decanters, drinking-vessels, and other articles are "cut," so that the pattern is smooth and sparkling; but in "cutting" these the workman applies the glass to the circumference of the wheel, and the finishing or polishing is completed by a disc of willow-wood or cork.

A much more astonishing process is the "engraving" of glass in those beautiful designs which are often so elaborate and so exquisitely finished. This is an art depending entirely upon the skill of the workman, since the operation is effected by a wheel of copper, the edge of which is supplied with oil and emery-powder. Before one of these wheels, which is of a thickness regulated according to the fineness of the work required, the engraver sits, and frequently without any previous marking of the design upon the dish, or goblet, or gas-globe that he has in his hand, grinds the pattern upon it with an accuracy truly wonderful. Of course, in the case of very elaborate designs the operation is a slow one; but having once got over our astonishment that the brittle glass is not smashed into a thousand pieces by the revolving wheel, it is very interesting to watch the pattern grow piece by piece upon the hard glittering surface. The manufacture of

Coloured or Stained Glass

is one of considerable importance in its connection with art, and although it would appear that we have lost the secret of producing some of the beautiful colours that may be seen in the ancient cathedral windows, there are still magnificent examples of stained glass produced at the great workshops, such as those of Messrs. Chance, at Birmingham, To produce a fine church window was formerly the work of one man's life for many years, whereas it can now be made in a few months; and probably the more careful experiment, and complete adjustment of every bit of colour in the window to the precise direction of the light that would fall upon it, rendered the ancient work more perfect as a whole than that of our time, when there is less patient painstaking. However this may be, there are several modern windows which are exquisite specimens

of design and harmony of tint, and doubtless improvements will be made in order to secure that depth and intensity of colour which are the great features of the old work.

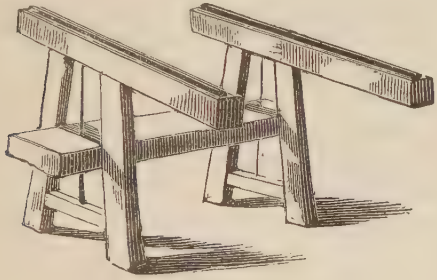
Coloured glasses are produced, of course, by the addition of small quantities of mineral ingredients to the melted "metal." Soot gives a yellow tint; preparations of copper, a red one; cobalt makes blue; manganese, a fine amethyst; iron, green; tin, an opaque white; and gold, that glorious ruby tint so effective in all stained windows. What are called stained glass windows, however, are not now always manufactured by placing together so many bits of glass of the required colour. The design is first drawn on paper, and the glass is laid on it, and the outline faintly traced with a coloured fusible glass. The parts intended to be yellow, orange, or red are then coated, either on one or both sides, according to the tint required, with a mixture composed of silver, antimony, and oxide of iron. The glass is then exposed to a red heat, in which process the tracing colour is fused, and adheres permanently to the glass. The mixture of silver and antimony stains the glass, but does not melt, so that the oxide of iron may be brushed off, leaving the glass coloured, but as transparent as before. The enamel is then added, and the glass is again fired, so that all become incorporated in one piece. Painting is sometimes used as well as staining; but, in painting, colours are of course applied only to the surface, and render it less transparent; in staining, the transparency is retained, the colour sinking into the glass only for a very small distance. The commoner sorts of coloured glass are made by a process called "flashing." The operator takes first a lump of coloured glass on his blow-tube, and over it a lump of the ordinary sort, so that on blowing it out into a cylinder the glass is covered on its inner side with only a thin skin of the required tint.

The method which we have described is not that used for the fine church windows and other great works of art, and it is desirable that we should give some description of the operation as performed at the large manufactories. Let us suppose, then, that the artist has to fill a window with stained glass. The first thing to be done is to make an outline on a small scale of the stonework of the window, within which he sketches his design, indicating the colours and the general arrangement of the subject, as a guide in future operations. This done, he proceeds to draw out the design exactly to the full size of the window, taking particular care to leave a broad outline for the strips of lead in which the glass will have to be fixed whenever necessary—a most important precaution, and one which, though apparently very simple,

requires no little management and experience to execute well. After the full-sized drawing is made, a second or "cutting" drawing is traced from it, showing only the lines where the strips of lead are to go, and omitting all other details entirely.

On this "cutting" drawing the colours of the several pieces of glass are marked by the artist, and the glasscutter then cuts out each piece separately, laying his sheet of glass on the drawing, and following the outline with his diamond. Each piece is thus cut out of the particular colour or tint required. If the piece is to be ruby it is cut from ruby glass; if blue, from blue glass; and so on, the colour not being put on afterwards, but every piece being separately cut from glass of the requisite colour. The only exception to this is in the case of yellow, which is the only colour that can be applied as a "stain" to glass without altering its surface. When the glasscutter has completed his portion of the work, the glass-painter takes the large design or cartoon, and, laying each piece of coloured glass separately in its proper place, he traces the outline upon it in vitrifiable colour. It is like drawing on a "transparent slate," except that a brush with opaque colour is used instead of a pencil. The outlines of the drawing, after being thus traced, are fixed by baking the pieces of glass as placed together in "muffles," or ovens with sliding shelves, or in a kiln, into which the glass is wheeled on a tramway on a carriage formed of flat stones and covered with an iron lid. As soon as the proper heat has been obtained, the kiln is allowed to cool, and the outlines are found to have been burnt in. The glass then goes back to the painter, who again takes the "cartoon," and covers it—or, if it is large, covers a portion of it at a time—with a sheet of colourless glass, then lays down on it each piece of glass on which the outline has been painted, exactly in its proper place, and fastens them all together on the sheet of colourless glass with drops of melted resin or bees'-wax. The sheet of glass, with the pieces of coloured glass adhering to it, is then raised and placed on an easel, and the shadows of the picture are put in. When the shadows are finished, the pieces of glass are again detached, and if any yellows are required, a preparation of silver is laid on wherever requisite. The pieces are then sent a second time to the kiln, the shades are burnt on, and the yellow stain produced. This process has to be repeated several times if much painter's work is required on the glass. When his work is complete, however, the finished pieces pass into the hands of the "lead-er," who takes the "cutting" drawing and lays each piece of coloured glass in its proper place, just as you might fit a "puzzle" together. He then begins to "lead up" the work with strips of lead, of various breadths, accord-

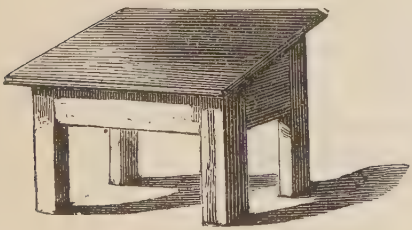
ing to the style of the work. The lead has been rolled through a vice, which shapes it so that a section of it looks like the letter H with a groove at each side to admit the glass. This lead he cuts into convenient lengths, and fits round the several pieces of glass. When he has joined them all together on the "cutting" drawing, he solders off the joints on both sides, and rubs a kind of liquid cement under the edges of the lead. When this is hard, the window is ready; but if it should be a very large one, it is divided into several pieces, which are fitted together when it is fixed in its place. Bars of iron are placed across the window at the line of junction, and at other convenient intervals; and ties of copper wire, previously soldered on to the leadwork of the window, are used to tie the glass to them, the sides of the glass being generally let into a groove in the stonework. The sides and joints are then finished off with a little putty, and the window is complete. We give engravings of some of the principal tools used in glassworking.



Chair.

Pucellas.

Pucellas.

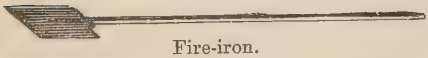


Stool.

Clearer.

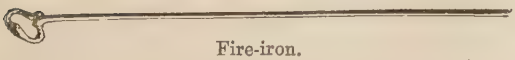
Pincers.

Fire-iron.



Fire-iron.

Fire-iron.



Fire-iron.

Flat Tool.

The True and Wonderful History of the Dog Dandy.

BY HIS OWN MASTER.

CANTO THE FOURTH.

DANDY A PILGRIM TO ROME.

LXXIII.

Having got somewhat tired of home,
We started off forthwith to Rome,
And visited St. Peter's dome.

LXXIV.

For Dandy, in dejection sunk,
And feeling some religious funk,
Had half a mind to be a monk,

LXXV.

And inwardly made resolution
That, ere the sun's next revolution,
He'd seek the Church's absolution.

LXXVI.

While passing convents, without fail
He vehemently wagg'd his tail,
Showing his wish to *take the veil.*

LXXVII.

His widow'd heart sigh'd for poor Flora,
So many years her stanch adorer,
And oft he pray'd *Pro nobis ora !*

DANDY IN OUDE.

LXXVIII.

Such was his sanctimonious turn
That Latin prayers he tried to learn,
Seated in church sedate and stern.

LXXIX.

And when the priests would lowly *bow*,
He grumbled forth a smother'd *wow*,
An edifying fact, I trow!

LXXX.

Losing him at the Coliseum,
Lo! in the Lateran Museum
I found him barking a "Te Deum."

LXXXI.

Where'er we went, he took his place
On carriage-box, and thus his face
Was known to all the Roman race.

LXXXII.

The Pope deem'd him so prepossessing
That once he paused, while men addressing,
To give this dog his special blessing.*

LXXXIII.

A famous sculptor, named Benzoni,
So loved him that, one day, alone he
Modell'd in clay his canine crony.

LXXXIV.

In fact, were I to mention all
That did this wondrous dog befall,
Folk might me a "romancer" call.

LXXXV.

Naples and the Pompeian Forum
He visited with due decorum,
And saw Vesuvius smoking o'er 'em.

LXXXVI.

Thence to the famous isle of Ischia,
Whose wine, tho' not so strong as whisky, a
Dose of it soon made Dandy friskier.

* On St. Anthony's day, at Rome, it is customary to bring animals from the neighbouring "Campagna" for the Pope's blessing.

LXXXVII.

By Genoa, Milan, and the lakes
His route the homeward traveller takes,
Ere he Italian land forsakes.

LXXXVIII.

In Como's water, for a spree,
He plunged and swam about with glee,
Right glad to find himself so free.

LXXXIX.

Thence, o'er the Alps to bright Lucerne,
He saw each place of note by turn,
Ere summer's sun had ceased to burn.

XC.

To Paris last at length he came,
Nor deem him very much to blame
If he pronounced it dull and tame.

XCI.

For was it not an insult great,
Enough to rouse his lasting hate,
To thrust a *muzzle* o'er his pate ?

XCII.

Nevertheless, he was not blind
To those famed charms of form and mind
Which are in "Eugenie" combined.

XCIII.

And, spite of ignominious gag,
Whene'er *she* pass'd his tail would magnanimously begin to wag.

XCIV.

But her imperial lord with scowl
He greeted, muttering a growl,
Which culminated in a howl.

XCV.

For, be he dog, or be he man,
No freeborn British subject can
Submit to foreign tyrant's ban.

XCVI.

And Dandy's soul in wrath would revel
To find himself put on a level
With Poodle, Pug, and Printer's devil!

XCVII.

To Calais having paid his fare,
Behold him next in easy chair
Smoking his pipe with lordly air.

XCVIII.

Settled in cozy kitchen nook,
He hinted lately to the cook
His purpose soon to *write a book*.

XCIX.

Meanwhile, this rude sketch I indite,
Lest death should dog and master smite—
And Dandy be forgotten quite.

C.

'Tis fit, ere ending, I should mention
Her Majesty's benign intention
To grant him a "good-service pension";

CI.

And therewith on him to bestow
The post—ne'er held by dog till now—
Of "HONORARY BOW-WOW-WOW!"

* * * * * *

Kind friends, farewell! May you as safely steer
Your course through life, and work out a career
As good as that you find recorded here.

The Letter of Marque.

By LIEUTENANT C. R. LOW, (*late*) I.N.

CHAPTER I.

IN WHICH I GIVE SOME ACCOUNT OF MY BOYHOOD.

IT is now some fifteen years since the death of my grandfather, Commander Bulwark, an old and very distinguished naval officer.

Some of my readers, not very conversant with the mysteries of promotion in the navy, will ask, "If your grandfather was a very distinguished officer, how is it that he did not attain higher rank than that of a commander, which, as all the *world* knows, is the same as a major in the army?" I reply to my guileless interrogator, "Promotion at the Admiralty, like kissing with the ladies, goes by favour."

Who, indeed, during his boyhood, has not known some old naval lieutenant who fought and bled under Nelson or St. Vincent, and who was shelved when the "war of giants" was finally concluded by the Peace of 1815, laid up in ordinary, like the line-of-battle ship in which he served, and suffered to drag out his existence on a half-pay of about £80 per annum?

The old man, whom some of us middle-aged men can remember, has gone to his rest now, and Death, who spared him so many years that one might almost think he had forgotten him altogether, did at length put his sickle to the over-ripe ear, and garner him also in his great storehouse. Such an one was my grandfather. He had no interest with the Tory Government of those days, or, indeed, with the Whigs either, when at intervals, few and far between, they came into power; he had no interest with "my Lords," and so he never rose above the rank of commander, which he attained in the year 1799; but for all that he was

"distinguished," and had fifty times been near enough Frenchmen in battle to see the whites of their eyes.

A brave, kindly, albeit gruff, old gentleman he was, and I propose to throw into the form of a narrative some of the incidents of his life. They were nearly all gathered from his lips, for, though I did not commit them to writing at the time, they impressed themselves deeply on my memory, for those parts of his adventures which most amused my brother and myself he used to repeat at our request. With this preface I will "begin from the beginning," as children say. I will, with your leave, stand on one side, and let the old man tell his tale to you without my acting as an intermediary.

My boys, as you have before heard, my father was a field officer in the East India Company's service, and often has he declared to me that better and more considerate masters there never were, which is more than I can say for my more aristocratic employers.

I was born in Dublin, and within three months of my birth my parents returned to India, where my father had always held good staff appointments.

I remember all my early Indian life well, but will pass over it with the mention only of a few reminiscences.

When the time came for us to go to England for our education, I was six years old, and my brother thirteen months older. Officers seldom keep their children out there after this age, as the climate is considered, and I think rightly, to be deleterious to the constitution of an English-born child; and as there are not any really good schools out there, not even in the Hills, it was decided that we should go "home" for our education.

Alas! England was no home to us, and I can never forget, old man as I am, and though I have seen much of the woes of life,—I can never forget the heartbroken grief of my poor mother as she parted from her two children, never more to see them in this sad world of partings and tears. Was it a presentiment of coming evils that weighed down her gentle spirit, and overwhelmed with an uncontrollable grief that heart which a strong faith and steady hope had hitherto supported in the trials she had known from her early girlhood? Whether such forebodings oppressed her I know not, but I can picture her now as with sobs she clasped me in her arms for the last time, and would not be comforted when they took us away from her.

When coming down the Ganges to Calcutta, an accident occurred to me which nearly obviated all necessity for the further adoption of plans

for the prosecution of my studies. I will tell you how it took place. On our way down the river from Benares, we used to "bring to" every night in a very primitive method. The "budgerow"—a large vessel, much resembling in architecture and general appearance the Noah's Arks with which children amuse themselves—is brought near the banks of the stream, and a spot selected for the night's halt. A couple of the boatmen jump out with a cable having a stake at the end; this stake is driven quickly into the ground by means of a mallet, the rope is "paid out" from the vessel until the stake is secured, and then it brings the craft up "all standing," as they say at sea: the budgerow thus lies during the night as near the bank as the draught of water will allow. The jackals used to come down and keep us awake with their hideous uproar, until my father perhaps seized a gun and shot one of them, when the others howled at a more respectful distance. Communication was kept up between the shore and the budgerow by means of a single plank, and we were instructed by our parents on no account to cross this narrow gangway without holding some one's hand. One night, when we anchored as usual, my father took us on shore for a stroll. Well, we boys, like disobedient daring monkeys as we were, after playing about for some time, determined to cross the plank by ourselves, it would be such grand fun! So, as our parents were not in sight, we essayed the dangerous task; my elder brother crossed in safety, and I, of course, followed. I had got about halfway across, and was just congratulating myself on accomplishing the feat, when, by some means, my foot slipped; down I fell! and I remember no more. Stay, I have a sort of flashing recollection of the water closing over my head, and I can distinctly remember the feeling of going down, down, down,—and then all was dark.

When I recovered consciousness I found myself lying on the small table in the principal apartment in the budgerow, with my father standing by me rubbing my body, and my mother leaning over me and sobbing. Oh! their joy when they discovered I was not dead, but had escaped with a broken collar-bone, and had only been half-drowned.

Talking about breaking my collar-bone reminds me of a somewhat curious circumstance. We must have been rather an adventurous family, for my eldest brother, who subsequently went into the army, while at Eton broke his leg; my other brother—the same who was my companion during this escapade—fractured his arm while we were playing leap-frog, not two years after the occurrence of the episode I have just related; and I, as I have shown, broke my collar-bone. The strange coincidence in connection with these family mishaps, to which I

have above alluded, was, that my father, at different times, and in various ways, during many years' travels in all quarters of the globe, and in his service in the army, was unfortunate enough to suffer all three accidents.

To return. The *Coromandel*, the ship in which we embarked for England, was one of the Company's trading ships, and a fine teak frigate-built vessel she was. What a couple of young rips we were, to be sure; and how incessantly we disturbed the equanimity of the old lady passengers on board the *Coromandel* by our hairbrained tricks!

We were always running about the rigging, and swarming "hand-over-fist" up ropes, to the imminent peril of life and limb, until the captain and chief mate swore they would "rope's-end" us. With all my harum-scarum ways, I recollect well the extraordinary effect the first sight of the sea had on my mind. Like most boys bred inland, I could form no notion of its grandeur and vastness; but when it broke on my astonished vision the morning we arrived at the Sand Heads, like the poet, I experienced the indescribable charm it exerts over all, even the most thoughtless minds; though, unlike the poet aforesaid, I could not clothe my ideas in his glowing language:—

> "Type of the Infinite! I look away
> Over thy billows, and I cannot stay
> My thoughts upon a resting-place, or make
> A shore, beyond my vision, where they break."

I will not recount how that soon after we sailed I was seized with the whooping-cough, and gave it to all the children on board,—there were thirty-two besides ourselves,—until the din, as we coughed in chorus at meal-time, was a thing to be heard. With my usual ill-luck, I nearly came to an untimely end during the voyage. It was in this wise:—

We two boys were always lugged up naked out of our warm "bunks" every morning at six o'clock, when the sailors were washing decks, and were dragged, "will-he, nil-he," to the huge tub full of water, below the break of the poop, from which the buckets were filled. Into this tub we were pitched head foremost, like pigs when undergoing the process of scalding; then, after scrambling out the best way we could, and before we had recovered our breath, any of the seamen who cared for the amusement splashed a bucket over us, and so, half-drowned and shivering, we scuttled down below to the soldier who had charge over us,—for we were taking some invalid troops home, and my father had paid handsomely one of the men to look after us. Blow high, blow low, we were hauled up from our warm berth; and it is a wonder that we lived through it all. One morning—I remember it well—it was blowing a

gale of wind, yet, as usual, we little wretches were turned out of our bunks: the ship was rounding the Cape at the time, and it was blowing great guns, and oh! so cold, when we were brought up to undergo our matutinal ducking. After the ordinary amount of semi-drowning had been gone through, with perhaps just an extra dose of buckets, we ran for the companion ladders on being released by our persecutors. The ship was taking great headers into the mountainous sea, while the water was washing about the decks, rendering the foothold very insecure; suddenly I slipped and fell, the *Coromandel* gave a tremendous lurch to starboard at the same time, and away I went flying along the slippery deck as if shot out of a gun. The large ports were open, and I was just disappearing through the yawning portals of one of them, when a seaman seized me by the leg and restored me, dreadfully scared, but "not one penny the worse," to the normal position of the "human form divine."

"My thanks are due," as commanding officers say of their subordinates in despatches, to that mariner "good at need," though I sometimes wonder whether a desire not to be deprived of the butt and mark of his morning's diversions did not, to some extent, influence him in the performance of this humane act.

Both my parents died in India within five years of our departure, from the effects of that climate to shield us from which we had been sent "home." "Home!"—Heaven save the mark! One would have thought that common humanity, not to speak of Christian duty, would have induced our guardians to treat us kindly, but it was otherwise. I must have been one of those unhappy juveniles who are always committing themselves to sinful courses of action; at least, to judge by the frequent castigations inflicted on my luckless carcase, one would conclude so. A word as to the couple who had charge of us.

People less fitted to bring up children, I suppose, never existed. The gentleman, a clergyman of the Church of England, was a high-minded, honourable man, but as stern and unbending as Rhadamanthus, and as mad—yes, as insane as —— well, as a hatter; that is the conventional simile for a hopeless lunatic, though why I know not; perhaps *Notes and Queries* can satisfy an "Anxious Inquirer." He was a tall, spare, powerful man, and the most rigid ascetic I have ever known, even among bigoted Roman Catholics. From Thursday evening, when he took a frugal tea, till Saturday morning, at breakfast, he never once touched a morsel of food; and I can speak for a period of more than seven years, during which I was, to my sorrow, an inmate of his house, or rather asylum. He only drank a little cold water during those

thirty-six hours, while, during the whole of Friday, he locked himself up in his bedroom, where he passed the entire day in earnest prayer and devout meditation. He was a sincere Christian, but shockingly severe, a singular combination, reminding one of the saintly hermits who, in mediæval times, betook themselves to caverns and deserts from the busy haunts of men. I have since learned that poor Mr. J—— was universally regarded as a gentleman of unsound mind; and this was the man—himself in need of a keeper—under whose charge we were placed by our friends! To give an instance of his eccentricity. He used to plunge us two boys into a cold bath, summer and winter, without omitting a day, but before doing so would force us to swallow a large teaspoonful of salt, piled up. Poor Nicholas Nickleby, with his brimstone and treacle, was nothing to it.

His wife,—well, she is no more; and there is much right feeling in the old saying, "De mortuis nil nisi bonum," or, as that wicked fellow *Punch* has cynically, but how truthfully, paraphrased it, "De mortuis nil nisi *bunkum*."

I revere deeply the memory of the austere, simple-minded Christian, whose whole life was devoted, with a rigid asceticism unsurpassed by devotees of the strictest monkish sect, to the chastening of all earthly passions, mistaken though he might be; but my friends surely ought not to have consigned us to the keeping of a person notoriously demented—who, in fact, had been obliged to give up an incumbency in consequence of this affliction. His helpmate I can only regard through the dim vista of an unhappy past, with, I am afraid, feelings of a not very Christian character. No! I have seen men flogged with a cat-o'-nine-tails, and receive fifty lashes, and yet I can truly assert that their sufferings, in some instances, were not as great as those I received at the hands of the insane clergyman, who, driven to flog me by his wife,—who hated my very shadow,—used to lash my body from my neck to my heels with his thick walking-stick in an access of frenzy, and with a ferocious light in his cold grey eye, that positively makes me,—grown man as I am now, and much as I have seen of brutality since,—that makes me, I say, while I write these lines, shiver with horror at the fearful memory.

Well do I remember how one morning, when exasperated beyond command of her feelings by a refusal on my part to beg her pardon for an offence I had never committed, this woman ordered her husband (pliant and obedient to her as a lunatic to his keeper) to thrash me. Seizing a stout stick, he, muscular giant as he was, flogged me with might and main. She stood by, and at length, having gratified her spleen, stopped him, and asked whether I would now humble myself to

her. Proud,—stubborn, perhaps; what you will,—I refused, with bitter tears wrung from me by anguish. Again was I savagely punished, again I faltered out a determined denial, saying I had done nothing. A third time I was flogged, until, fainting and mad with pain, I broke down. I was only a child of twelve at the time, and sobbed forth my request for mercy; "I beg your pardon" fell from my lips, but a perfect hell of hate and despair gnawed at my young heart. This, my boys, is no fiction told to touch your hearts with pity, but sober truth. I was friendless, an orphan, and alone, for we lived not on the mainland of England, but in one of the adjacent islands; and in those days of coaches and sailing packets this island was a very "Ultima Thule." I pondered all that day over my misfortune. They left me to myself, for I had been so severely chastised I had to go to bed. I wept as the memory of my gentle mother came over me with its softening influence, and my mind reverted to happy days gone by in distant India. I resolved that night to run away, and determined to try the sea. We lived at a seaport town, and I apprehended little difficulty in getting a ship. My brother, being a favourite with the lady of the house, was not badly treated, and did not care therefore to join me; but I was desperate, and fully resolved to brave all the consequences of so rash an act.

Thus it was that I was driven to go to sea.

CHAPTER II.

A CRUISE ON THE FRENCH COAST.

I DEFERRED putting my plan into execution until I was physically fitted to do so, as for some days I could scarcely walk, so severe was the flogging that had been inflicted on me. At the end of a week I felt sufficiently restored to make the attempt. It was at night, about half-past eleven o'clock, that I managed to slip unobserved down the stairs and out of the house.

The wind blew round the street-corners in strong gusts, and with the icy chilliness of a north-easter in the depth of winter. I had some distance, about a mile and a half, to walk before I could reach the quay where lay the trading vessels. After a dreary miserable trudge through the darkness, and carrying a small bundle of clothes, I reached the quay, to which some half-dozen small craft were moored. I was not sorry to get among the oil lamps again, which, few and far between, lit

the aquatic thoroughfare, for, to tell the truth, I was rather frightened at the silence and solitude of my walk. I made my way over the coils of ropes, and blocks, tackles, and other gear, which were strewed in my path, and walked on until I stopped before a schooner which had been discharging her cargo of fruit for the last three weeks. I had been on board of her with some of my companions, and we had at times invested our pocket-money in the purchase of oranges, with which she was chiefly freighted. I knew she traded between Barcelona and Liverpool, but, owing to a gale of wind, had been driven out of her course; she had sprung a leak also, and the water had done considerable damage to the cargo of fruit, which the skipper had therefore to dispose of as best he might.

It was while conversing with the sailors, on those rare occasions when I had any cash to spend, that I learnt that two of the ship's boys had been washed overboard, and that the skipper was desirous of shipping others in their place.

I now, therefore, went on board, and offered my services, which were at once accepted; I was just in time, for next day the schooner sailed "in ballast" for Liverpool. Thus it was I became a sailor.

Unlucky wight that I was! I had existed for some years in a continual state of hot water, but I now discovered that I had but fallen "from the fryingpan into the fire." If I was beaten and treated unjustly before, I now suffered starvation in addition to my other misfortunes; I could not stand this, and determined to run away a second time, though, indeed, I began to fear that life was only one long continual state of suffering and ill treatment; however, evil fortune had frowned upon me long enough, and my estimate of life I found was of too sombre a character.

Of the five men composing the schooner's crew one only refrained from knocking me about, but, as I was the only boy on board since the drowning of my two predecessors, I got monkey's allowance, "more kicks than ha'pence." I learned from this man one day that if I escaped to a man-of-war the skipper had no power to demand me back; this set me scheming, and one day the long-wished-for opportunity arrived.

We were lying in the Medway, when one of the King's frigates sailed majestically up that river, and brought to not far from us. A gleam of hope diffused itself through my mind; I would try and swim off to the ship; I cared little if I was drowned in the attempt, for so consistent and cruel had been the tyranny to which now for eight months I had been subjected that I was prepared to do anything to escape from the

hands of my brutal masters, who loved to heap every indignity upon me because, as they took care to inform me, I was the son of a gentleman, and had peculiar notions about cleanliness. As soon as night closed in I lay down, but not to sleep; eight bells (12 o'clock) struck, the middle watch relieved the two men composing the first watch, and then I rose to make the attempt.

It was a bright starlight night, similar to that so beautifully described by Byron, when Don Juan and Haidée strolled along the beach, and—

> "Gazed upon the glittering sea below,
> Whence the broad moon rose circling into sight."

First ejaculating a short but heartfelt prayer for a successful issue to my enterprise, I watched my opportunity while the backs of the men on duty were turned, and, climbing over the bows, dropped noiselessly into the water. I struck out towards the frigate, but had not gone far when I discovered that there was a current setting seaward, and that I could barely make way against it. The frigate was little more than a cable's length distant, and I could swim half a mile with ease, but I had not calculated for this adverse current. Animated with despair, I put forth all my strength, and succeeded in reaching halfway towards my refuge.

I watched by the bows of a distant ship to ascertain whether I opened out any of the lights twinkling on shore, but, alas! I found by this method of judging my rate of progress that I was stationary; soon, I knew, I should be going astern, and then I must be captured by my persecutors, and taken back to the hated schooner. I dared not shout; I firmly believe I should have been drowned on the spot where I was struggling with the eddying water, when a hail from the man-of-war greeted my ears. "Hullo, there!" a voice sang out; I answered, joyfully, "Help! or I shall be drowned!" The figure disappeared off the forecastle, and in a few seconds half a dozen men were running along the lower studding-sail boom, which had been swung out, man-of-war fashion, for the boats to moor to; then, in another minute, the cutter was cast adrift from the pennant, and then, on being manned, was shoved off, and made towards me. Oh, my happiness at the thought of deliverance!

But my absence was now discovered in the schooner, and a well-known gruff voice hallooed out to me, "Come back, you young dog, or I'll be the death of you!" I gave no answer, but kept my eyes fixed on my preservers, and my arms striking out at my utmost strength. Now two men jumped into the fruiterer's jolly-boat,—one was the dreaded skipper. They pushed off quickly towards me, but all too late;

the frigate's cutter reached me first, and, half dead with exhaustion and fright, I was pulled in by a couple of sturdy arms. The schooner's boat followed in our wake, the skipper all the time cursing every bone in my body, and vowing he would bring my deliverers to justice for interfering with his apprentice, a threat at which they laughed loudly, and further infuriated the tyrant by jocular questions concerning his "jordy," as they called the schooner, and personal allusions as to when he had last washed his face. He followed us, and soon after we arrived within the sheltering protection of the man-of-war's wooden walls came alongside, and asked to see the captain. The result of his interview with that officer was of a character to astonish him.

Directly I heard Captain Fairfax's name mentioned I pressed forward to see him. A sudden idea occurred to me; I had an uncle of that name in the navy, whom, however, I had never seen, though my mother, whose favourite brother he was, had often talked of him to me. I rushed up to the kindly-featured, noble-looking man, of about forty-five, who just then came on deck, and gazed at him with earnestness. One look was sufficient; his eyes and mouth had the same expression of gentleness that characterized my mother's. Throwing myself at his feet, I poured out my tale of suffering and wrong, implored him to keep me in his ship in any capacity, and finished up by mentioning my name, and my belief that he was nearly related to me.

The astonished officer started on hearing my story; he stooped down, and, after scrutinizing my face closely for a moment, raised me up in his arms, all dripping with water and shivering with cold and agitation as I was, and comforted me with the assurance of his protection. It was indeed my uncle whom I had encountered under such singular circumstances. The skipper was sent back to his ship with a stern caution, and I was forthwith rated on the books of H.M.S. *Ulysses* as a "volunteer of the first class," and, as such, an officer of the same standing as a naval cadet of the present day.

I will pass over all mention of the early part of my service in the navy, as it is foreign to my experiences in "The Letter of Marque," but I will only say that I saw my share of the hot work then on hand; some other time I may give you an account of my career as a volunteer and midshipman; suffice it to say that I passed my examination as mate, and speedily got my lieutenant's commission.

It was in the year 1793, at the commencement of the war with France, that I received my first command. I was just twenty-two years old, and my uncle, who had stood my firm friend ever since we met on the deck of his ship, the *Ulysses*, succeeded in obtaining for me the "swabs,"

as we call a "lieutenant's epaulettes," in the service. He knew a good many wealthy London merchants, having often commanded ships of war convoying their ventures, and he introduced me to a gentleman who was at that time fitting out a Letter of Marque.

My new friend immediately made me an offer; I was to have the command and one-sixth of all profits derived from captures. Being anxious to have an independent command, and caring little about the "main chance" in those days, I eagerly closed with his offer. The barque lay at Portsmouth, and I went down to inspect her; she was a fine, smart-looking craft, though somewhat old. As holding his Majesty's commission, I succeeded in getting the assistance of the dockyard authorities in fitting her out.

Within a month she was ready for sea. I beat up for recruits, and, having first shipped some half-dozen old hands who had been shipmates of mine in the service, and who were ready to "swear by me," I had not much difficulty in completing the vessel's complement.

I called her the *Red Hawk*. She was barque-rigged, and of about 350 tons measurement; her crew numbered some 80 men, all slashing, devil-may-care fellows; our armament consisted of 10 twelve-pounders and 2 thirty-twos, all carronades. This was not a powerful battery, certainly, but then my ship was not built to carry heavy guns; our chief duty lay in harassing the enemy by cutting up his trade, and inflicting as much injury on his commerce as lay in our power. Of course, we were ready to fight should we encounter a vessel of our own size and weight of metal, for the *Red Hawks* would have been unworthy the name of British tars if they had possessed no stomach for a fair stand-up fight, which I take to be one of the chief characteristics of the biped aforesaid.

With a fair easterly wind we set sail down Channel; my crew were nearly all old men-o'-war's men, so it required little drill at the great guns to knock them into shape. Hardly were we out of sight of land than we had a taste of the dangers of privateering. A large ship was made out from the mast-head, which proved to be a heavy French frigate. We showed our heels to her, and but narrowly escaped capture; indeed, had not night intervened, there is little doubt our expedition would have ended there and then by our incarceration in a French prison, a fate worse than death in the eyes of seamen. But by good fortune the night set in dark and tempestuous, and we eluded our pursuer, which, by the first-rate sailing qualities she displayed, must have been one of the swiftest cruisers of the enemy. Our turn now came to play the hounds. On the fifth day we sighted a barque which

showed French colours. The *Red Hawk* spread her wings in pursuit, and after an exciting chase of eight hours we overhauled our prey sufficiently to fire into her. A round shot from the bow-chaser "brought to" the fugitive; she let fly her topgallant halliards in token of surrender, and "rounded to" submissively. I sent our first lieutenant to take possession of her; she proved to be *La Bastille*, and was rather a valuable prize. Putting a sufficient number of hands on board to navigate her in safety, and keep guard over the French prisoners so as to prevent a recapture, I placed my second officer in charge, and sent her back to England, with directions to her new commander to be at Falmouth that day three months with his men, at which date I hoped to return and re-embark them.

Our next venture was more hazardous and less remunerative. Some twelve days had passed away without anything turning up; we were standing "off and on" the French coast a little to the westward of Bordeaux, when the look-out man sighted a schooner; sail was set in a trice, and away dashed the *Red Hawk* as if she sniffed her quarry. The schooner now saw her danger, and—as we thought, fearing to trust to her sailing qualities—ran for the land. We followed in pursuit; her reason for changing her course soon became evident; as our barque neared the coast, under all the sail she could carry, we discovered a semaphore station with a small fort attached. The schooner made for this shelter, and so confident was she of protection that she had the audacity to open on us with a gun she had mounted in her stern. Soon she ran aground under the walls of the small fort, which now also began to blaze away at us. It was to be a "cutting-out affair," we saw; preparations were quickly made; our boats were lowered and manned with some fifty men armed for boarding, the guns all the time keeping up a hot fire on the fort and schooner. Away dashed the boats for the latter first; the French sailors kept up an ill-directed fusillade upon the advancing cutters, but when they saw from our proximity that it had no effect in cooling our ardour,—for the foremost boat was only twenty yards off,—they threw down their arms and bolted, deciding "that discretion" was, in this instance at least, "the better part of valour." It was amusing to see the eagerness with which they made themselves scarce; their agility in vaulting over the shore side of the schooner, and scampering up the beach to take shelter under the protecting ægis of the fort, was highly commendable, viewed solely, I mean, in the light of a gymnastic performance; as a "strategic movement to the rear" it was perhaps not quite so praiseworthy. But, ah! what consolation to skedaddlers in general is breathed in those Hudibrastic utterances—

"For those that fly may fight again,
Which he can never do that's slain;
Hence timely running's no mean part
Of conduct in the martial art."

But our brave fellows had not done with them; as commanding officer I thought we might as well, while we were about it, destroy the semaphore station, so our boys, with a loud hurrah, charged up the acclivity. They were so smart in the use of their legs, and followed so closely in the wake of the French sailors, that before the garrison, consisting of some twenty artillerymen, could depress their guns sufficiently to bear on our advancing column, we had gained a footing in the fort.

It was an old dilapidated sort of a work, with none of the modern appliances for defence. After a desperate fight of some ten minutes we remained masters of the position; the union-jack was hoisted above the republican tricolour, and three cheers given for the king. The soldiers fought well, to do them justice, but they were completely taken by surprise, as having no conception that so small a force would dare to carry by storm a fort mounting twelve heavy cannon. The larger number of the garrison leapt over the low ramparts, and managed to escape; and, as we did not care to encumber ourselves with prisoners, we gave their liberty to the remainder.

Before evacuating the place the semaphore was burnt, the guns spiked and tumbled into the ditch, and the works dismantled. We then marched down to the beach and inspected our prize, which now that it was ebb tide lay high and dry on the shingle; to our disgust we found she was in ballast, and had not a particle of cargo in her. In a rage my men fired her, and then, taking to the boats, we re-embarked.

Our loss in this affair was one killed and three wounded. Though there was no booty, some damage had been inflicted on the enemy, and perhaps it was not inglorious to those concerned. Soon after this enterprise was concluded I was enabled to be of great service to the British fleet under the command of Lord Howe. We had seen nothing of any of the enemy's vessels for some little time; indeed, owing to the extreme efficiency of the flying squadrons under the command of such dashing officers as Sir Edward Pellew (afterwards Lord Exmouth) and others, privateering was not so remunerative a speculation as in days of yore.

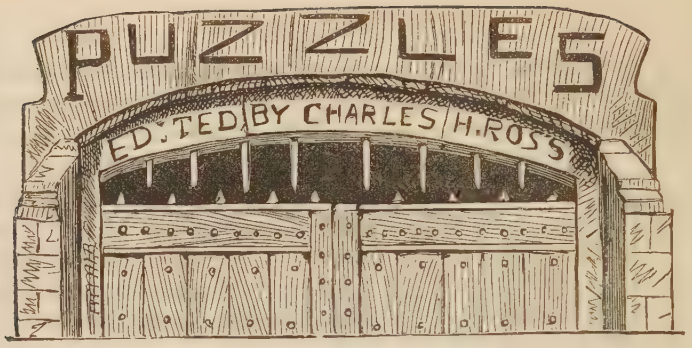
One morning we were under easy canvas, when the fog which had lain heavily over the sea all night suddenly lifted. What was our astonishment to behold a large fleet sailing in two grand divisions; the frigates, which act like the light cavalry of an army in the field, were

certainly not distant more than some five or six miles. On this being reported to me, I hurriedly ran up aloft to the foretopmast crosstrees; a moment's glance at the ships convinced me that it was none other than the entire French fleet, which, according to the information we had received, had been fitting out for some time past in order to try conclusions once more with the invincible English. I immediately crowded all sail on the *Red Hawk,* but not before she had attracted the notice of one of the nearest frigates; this vessel gave chase, but, after a short pursuit, was recalled by signal from the French admiral's ship, who doubtless considered us beneath his notice. I made my way to Falmouth, and, posting up to London, informed the Admiralty of the important fact of which I had accidentally become acquainted.

The result was that Lord Howe, after thanking me warmly in person for my information, put to sea forthwith, and gave the enemy the desired opportunity of again meeting the British fleet in line of battle. Of course, as usual, the Frenchman was beaten, and the "glorious first of June" added another leaf to that chaplet of victory which adorns the brow of Britannia. So the little Letter of Marque—like the jackal to the lordly lion—played a useful though humble part in the drama of that great day.

On my second return into port, the owners of the *Red Hawk* began to be discontented at the amount of prizes and the value of the captures. The ship's expenses were very heavy; competition had destroyed the once fertile field that existed in those seas for such "snappers-up of unconsidered trifles" as the privateersmen. It was decided the venture must either be given up altogether, or a new arena of operations selected; the latter course was, after much discussion, adopted. I carried my proposal of a visit to the waters surrounding Mauritius, or, as it was called, the "Isle of France," for at that time the French possessed not only this island, but also the Seychelles group. My men gladly agreed to accompany me and share my fortunes in those Indian seas, so, after a run on shore, just to spend the pay and prize-money they had earned so laboriously, they rejoined the ship to a man at Portsmouth, and, thanks to the same facilities I had before enjoyed, the little *Red Hawk* was soon thoroughly refitted for her long flight round the Cape. In three weeks she was all "a taunto," and looked smarter than ever.

(To be continued.)



1.

I am, word of ten letters.

My 9, 8, 4, 10 is a girl's name.
My 3, 2, 4 is an animal.
My 6, 7, 10, 1, 3 is curious.
My 4, 10, 2 is a beverage.
My 4, 5, 10, 3, 10 isn't here.
My 4, 5, 8, 4 is a pronoun.
My 5, 1, 8, 3, 4 is man's tenderest part.
My 5, 2, 3, 4 is an animal.

My *whole* is a convulsion.

2.

Double Acrostic.

Twice a year my *first* is seen
Raging o'er sea and land.
My next, 'tis like my *first* I ween,
Still'd but at God's command.

1. No ship can sail without my aid ;
2. What teaches you to spell ;
3. A short respect to Morpheus paid ;
4. And what will serve you well.
5. A concert which will give delight ;
6. A wrestler much renowned ;
7. And lastly what, though lost to sight
   Can yet in air be found.

Cryptograph.

3.

Gfgaui gvv xwejdax wvjgunr do tjum
Ju teu do vdc legyee, gvv xtddip wyeieune !
J leiiey vjre g lvaui jumjooeyeune
Gum x-evo-yexwenijug xvdcuexx, mjxjvnvjuem
Id cju tl gi ojkyi xjqpi : gum le ipeye sdjuem
Wgijeune gum ietwey gune cjip ipjx pjqp yexeyfe.

4.

To those who serve you for their bread
Be sure my *first* you give.
My *second* grows upon the earth,
Or 'neath the waves can live.
My total labours for my *first*,
And justice 'tis his due :
Be thankful if a different lot
Exempts from labour you.

5.

1. Clear.
2. An exclamation.
3. A river in Russia.
4. A musical instrument.
5. To be in debt.
6. A town in France.

My *initials* give a city in England, my *finals* the river on which it is built.

6.

My first is like a summer tree,
Is witty, foolish, learned;
My next produces many a fee
By doctors quickly earn'd.
My whole displays in shining rows,
My first to hungry eyes;
Let them go dine with rooks and crows,
Who would that feast despise.

Celebrated Composers.

7. Oh gild France derge reek.
8. In a villa law went Meccli.
9. R. R. be Mac Ivanhoe rawl.
10. I Garozilo—too Nelinna Linc.

Countries.

11. 152 aga.
12. 1111 eo.
13. 1153 bash troba.
14. 152 aroaf.
15. 551 a roof.
16. 1600 agarasa.
17. 102 yra.
18. 302 Noah H. N.

19.

My *whole* is required in a ship; transpose, quiet; again, what people live on; again, a number of horses; curtail, a beverage; transpose, the present and past tenses of the same verb; curtail, a preposition; again, a vowel.

Word Squares.

20.

Space.
Pain.
A town in Italy.
A fact.

21.

A Mahomedan god.
Trifling.
A tune.
Low.

22.

A check.
Other.
An English river.
A habitation.

23.

My *second* is sometimes my *first*,
My *first* beheaded 's my *second*;
My *whole* is oft used to quench your thirst,
And a nice drink by some people reckon'd.

24.

Money.
River in Asia.
A plaything.
To fit out.
Country in Europe.
River in Africa.
Real.
To clinch.
A planet, curtailed.
Important.

The *initials* and *finals* give the names of two astronomers.

25.

A fish.
Wealth.
Freedom.
A vegetable.
A bird.
Town in Spain.
City in Europe.

The *initials* and *finals* name two painters.

26.

Reverse my *first* and go to it
If money you would spend;
My *second* is a hindrance—
And will be to life's end.
My *total* aids the traveller
To bear his scanty store,
His scraps of linen, eatables,
Or literary lore.

27.

My *initials* read down name a famous poet, and my *finals* read down name an English archbishop.

1. A Scotch king.
2. A town in Ireland.
3. A Spanish battle.
4. A Royalist battle.
5. A country of Europe.
6. A town in the north of Africa.
7. A town in Spain (curtailed).
8. A town in England (curtailed).
9. A king of East Anglia.
10. A town in the north of France.
11. A governor of Hull.
12. A noted Prince.
13. A town in Yorkshire (curtailed).

Hidden Poets.

28. Jane always hides the poets.
29. The Dr. tried to flog Andrew.
30. I hurt my knee leaping.
31. The Mayhor never reads poetry.
32. Luzem is the grandest lake at Switzerland.

Word Squares.

33.

A pace.
To weary.
An ancient language.
An equal.

KEY TO PUZZLES ON PAGES 445—448.

1. Turner, Cooper.
2. Sport.
3. Velocipede.
4. Bootjack.

5. Cryptograph.

There was a sound of revelry by night,
And Belgium's capital had gather'd then
Her beauty and her chivalry; and bright
The lamps shone o'er fair women and brave men;
A thousand hearts beat happily; and when
Music arose with its voluptuous swell,
Soft eyes looked love to eyes which spake again,
And all went merry as a marriage bell.
But hush! hark! a deep sound strikes like a rising knell.

6. File, Ibex, Levi, Exit.
7. Moon, Otto, Otho, Noon.
8. Ring, Idea, Neat, Gate.
9. Piano, India, Adzes, Niece, Oases.
10. Benjamin Franklin, George Washington.
11. Bicycle.
12. Beethoven, Meyerbeer.
13. Brighton, Plymouth.
14. Sentiment.
15. Covetable.
16. Senseless.
17. James Watt.
18. Daniel Defoe.
19. Edward Jenner.
20. Oliver Goldsmith.
21. Charles Kingsley.
22. Douglas Jerrold.
23. Samuel Johnson.

24. Cryptograph.

The last sad hour of freedom's dream,
And valour's task, moved slowly by,
While mute they watched, till morning's beam
Should rise and give them light to die.
There's yet a world where souls are free,
Where tyrants taint not Nature's bliss;
If death that world's bright opening be,
Oh! who would live a slave in this?

25. Snipe.
26. Spot.
27. Barrack.
28. Keswick.
29. Wigan.
30. Derby.
31. Deal.
32. Leith.
33. Palermo.
34. Builth.
35. Hythe.
36. Abercrombie.
37. "Paddle your own Canoe."
38. Echo, Clan, Hazy, Onyx.
39. Bulk, Upon, Lone, Knee.
40. Gold, Ohio, Lion, Done.
41. Ever, Vase, Else, Reed.
42. Heir, Elbe, Ibis, Rest.
43. Condemnation.
44. Vegetarianism.
45. Dromedary.
46. Wiseacre.

Kronheim and Co., *London.*

BOWLING.

BOWLS AND BOWLING.

IT was at St. Werstan's that I first learnt to "play at bowls" and "expect rubbers," as Dr. Bowles wittily replied to Lord Byron. Many of you know the spot. The grim old grey cathedral rises on one side of the college close and the school-building on the other, and beyond all, that grand flowing river, which was the wonder, dread, and delight of my schoolboy days. Dear old Chatwood, the verger at the cathedral, was our instructor, and dearly the old man used to enjoy "a cast" with us boys. I can see him now, with his white head bending over the green, as with the subtle twist of his right hand he sent the ball on that curved journey which effectually landed it nearest "the jack," despite of intervening balls and our utmost skill. Yet Ned Morton was no mean hand, and Frank Baker, it was whispered, used to betake himself on holidays to "the green" at Wapenshaw and play matches with the villagers. Poor "Chatty," as the boys called him, lies with the daisy-speckled turf over him within sound of the cathedral bells. Poor Ned fell at Delhi, and Frank, after a round of lion and antelope shooting at the Cape, has retired to the position of a village squire, where he has a green of his own, and on which I shall play my next game at bowls.

There used to be a famous bowling-green in the "Old Court Suburb," where Canning was often seen bowl in hand, the site of which I visited some time ago in company with my friend "the counsellor," whose memory goes back to the far-off time of "bucks" and "bloods;" and I know a delightful old green where a score of old-young boys even now meet to have a quiet game and talk over old days at St. Werstan's and

the deeds there performed, for the memory of the old place is as green as the turf of the velvety sod on which we play.

Perhaps there are some who have no "old Chatty" to explain to them how the hard round sphere of *lignum vitæ* has one side loaded with lead and slightly flattened, so as to give a curved direction to the ball when necessary. We were told that the green should be as flat as a mirror, and the grass as short and crisp as the nap of a piece of Venetian velvet. Since then I have played on greens of all sizes, but the old man used to say that a green twenty yards square was "fit for a king" to play on; but in reality the size of the green, so that it is long enough, does not matter in the least. Frequent rolling, watering, and a free use of the scythe will make any level lawn fit for a bowling match in a week or two.

With respect to the balls, they can be purchased in sets of four pairs, with jack, packed in a box, for 31s. 6d. (a smaller size, suitable for ladies and small boys, for 25s.), at any warehouse where games are sold. The balls are inlaid with ivory so as to show the number of the player thus · : ∴ ::

The ordinary game of bowling-green bowls is thus played:—Each player chooses a pair of bowls, if he has not any of his own. These bowls he retains during the game. If there are only three players, they play against each other singly; but when a larger number wish to join in, sides are formed and partners chosen by all casting their balls towards the jack, and those nearest to the jack, two, three, or four in number (according to the strength of the party), form one side, while the outsiders form the other.

The game is commenced by the nearest player to the jack, when throwing for partners, taking the jack (a smaller ball used as a mark) and throwing it wherever he pleases, generally some ten or twelve yards away, though there is no limit to distance as long as it remains on the green. The player then throws, or rather trolls, his bowls consecutively towards the jack, with the view of letting them rest as near to it as possible; the other players then follow in the same way, one of each side playing alternately till all have played. The score is then counted. The bowl that lies nearest to the jack counts as first cast on the side to which it belongs, and they score all the balls that lie nearer to the jack than those of their opponents. Seven casts are usually counted a game, and unless a special agreement is come to at the commencement, it is considered as such.

The skill of the players is evidenced by the manner they can troll their bowls so as to overlap the bowls of the previous players, if

opponents, or knock those belonging to the same side nearer the jack. These are nice points, and demand a keen eye and steady hand.

As the distances vary, and the green itself, however well kept, is not always as smooth as a billiard-table, there is always an opportunity for the display of skill and judgment. The bias of the bowl has to be considered, for it enables the player to divert its direction so as to produce a variety of curves, astonishing to the uninitiated. The second cast is always taken from the spot where the first jack lay, so that the game varies at the will of the player who casts the jack. This, combined with the pleasant surroundings, makes bowls one of the most social, most popular, as it is one of the oldest of outdoor games. At the latter end of the last century it was played nearly universally by rich and poor. In the northern counties it is still played by all sections of the population, and there are but few more social meetings than those which take place on the club or public bowling-green. Its great enemy and rival is croquet.

What are called lawn or parlour bowls is a modification of "bowling-green bowls," adapted for children of both sexes. The bowls are smaller in size, and painted of various colours. The "jack" is a larger ball, from the sides of which eight equal slices have been taken, until it forms a species of die of an octagonal shape. On each face there are numbers, from 1 to 8. At the commencement of the game the side with the figure 8 is placed downwards, and whoever succeeds in striking the jack and turning the 8 upwards wins the game. It may be played in a parlour or on a lawn, and is often very interesting.

Amongst the many outdoor games with bowls is the trolling of a heavy stone ball along a macadamized road, a species of amusement practised in many districts in Ireland, to the extreme danger of the legs of the passengers or of the cattle on the road. On a suitable spot it is a good athletic game, and, as the sole aim is to try who can send the ball farthest, not much skill is required.

Another species of outdoor bowls is a modification of bowling-green bowls adapted for a large party on a large expanse of green sward. The balls are not much larger than croquet-balls, and marked in the same way. The jack is a larger and more conspicuous object. The game is commenced as in ordinary bowls, but each of the party playing has only one circular ball or bowl, with which he endeavours to hit the jack. The nearest ball counts one towards the game. There are no niceties of play, as the "jack" is thrown at will amongst the grass-tufts, and it is simply a rambling game for a large party.

American Bowls is a very different game, for it is one that requires

accuracy of aim and considerable muscular strength. It is far superior to ordinary skittles, and is by far the best of ordinary indoor athletic games. The addition of two or more bowling alleys would not be an unwelcome addition to the gymnasia of many of our large schools during a continuance of wet weather. They are very popular in America, but they have not been, in any sense of the term, naturalized in the United Kingdom.

The formation of an alley is the most important feature of the game. It consists of a wooden platform, perfectly level and smooth, some four feet wide and sixty feet long, with two grooves or channels on either side. The first groove on either side of the platform receives the balls propelled by some awkward player. The outer grooves are elevated some three feet above the level of the platform, and, as they have a slight inclination towards the player, the balls placed in them return to his hand, besides forming a screen or barrier between the alleys when placed side by side. The ten pins, shaped something like hock bottles, are placed in a triangular form, the apex of the triangle being towards the player, who delivers his ball after a run of five or six feet along the platform. At the far end of the platform, behind the pins, there is a sunk recess, into which the pins fall, and beyond this a cushioned stop for the balls, generally made of sacking stuffed, or a tanned hide, stretched and fastened to springs to deaden the force of the balls. When these alleys are fixed side by side in a well-lighted saloon, with seats on either side for spectators, and at the end for the players, it has by no means an unpleasant appearance.

The first time I played at American bowls was at the pretty watering-place of Portobello, near Edinburgh. I was staying there with some old friends, who, to while away the time until the train started, strolled into the somewhat rude saloon adjoining the beach. In my lessons there I soon discovered that the great art consisted in hitting the central pin at the apex of the triangle with a half ball of moderate strength, which, if well delivered, placed the whole ten pins *hors de combat* at once, and I have seen dexterous players repeat this every ball thrown. this feat counts ten—one point being counted for every pin knocked down—it would add thereby to the score. The highest number possible to be scored during a game of ten divisions is thus ten to each ball—three balls to each division—in all three hundred. Technically, when all the pins are knocked down by one ball, the rest are called a *double spare*, and if at two balls, the remaining ball is called a *spare*.

The score is kept on a slate or black board divided into ten times ten squares. In the front the number of the line is placed to represent the

divisions, and at the head of the column the initials of the players. The order of playing is usually settled at the commencement of a game, so that one, two, three, or more divisions can be played at a standing, just as may be agreed.

In choosing sides (for any number can play, but not more than five of a side, or ten in all, should be concerned in one game) it is usual to handicap the least skilful players, so that the sides may be equal as far as possible : thus a bad player may get four balls in place of three in a division, or receive a gross number of ten or more points.

As a rule, all pins knocked down whilst playing count, even if the ball is a back one. No persons but players are allowed to stand on the platform in front of the alleys. Ties must be decided by a single ball. No player must advance beyond the chalked line in advancing to deliver the ball. Pitching the balls is not allowed. An umpire, usually the marker, is chosen in case of dispute, whose decision is final.

The balls used are varied in size and weight, and the players choose those with which they are most familiar, as some weigh only four pounds, whilst others weigh eight.

I would especially caution the young and inexperienced player against using too much force until he becomes habituated to the weight of the balls, and the muscular strain in delivering them.

There is something exhilarating in all games of bowls. The exercise is really healthy; it expands the chest, and, as my old instructor "Chatty" used to say, it was not always the best-intentioned ball that did the most mischief. A sound judgment must aid the skilled eye and steady hand. B.

The Letter of Marque.

By LIEUTENANT C. R. LOW, (*late*) I.N.

CHAPTER III.

THE NIGHT WE SAW THE "FLYING DUTCHMAN."

NOTHING of importance occurred during the early part of our voyage. On the second day out we spoke H.M.S. *Bellerophon*, or, as men-o'-war's-men called her, the *Billy Ruffian*, a gallant old ship that has made an undying reputation in the navy, as evidenced by there always being one of that name in the service. This was the first ship we encountered (and during our cruise in the Eastern seas we met the old flag everywhere, both in storm and sunshine) of that vast fleet which now for 200 years England has always sedulously maintained to uphold her proud position as the first and chief of naval powers.

The greatest orator America has yet given birth to,—I mean Daniel Webster,—once, in his place in Congress, gave utterance to this truth in a burst of his unrivalled eloquence: "There is no hour," said he, "of the twenty-four which, in one or other of the two hemispheres, does not see her ancient banner flung to the morning breeze, or hear the drum beat, or the bugle-call of her soldiers sound the réveille." I fear very much that, as a great naval power, we are not what we were when Lord St. Vincent lay at anchor at Torbay with the Mediterranean squadron of fifty-five line-of-battle ships, the smallest a seventy-four. Fifty-five ships! and that was only one fleet: Britain had half a dozen such. Nowadays, forsooth, we are contented, nay, indulge in what the Yankees call "tall talk," if we can count some forty ironclads of all classes. It used to be considered a political necessity by English statesmen that our fleet should equal any two naval powers combined. During the recent American war the iron walls of Britain—which form the chief

rampart against invasion—were outnumbered two to one by those of our "American cousins" alone. "We intend, some day, to have that little island of yours," observed one of these same "cousins" to a military friend of mine travelling in the United States.

We succeeded in sailing through the Bay of Biscay without sighting any cruisers of the enemy, and, with a fair northerly wind, passed the Western Isles, until we got the N.E. "trades," which carried us near the Line without our having occasion scarcely to touch a ropeyarn. Here, of course, we were becalmed in the "Doldrums" for nearly three weeks, but, at length, catching light breezes, we gradually edged our way to the southward, until one evening, as the men were lolling about the deck, our sails were taken flat aback, and we found the S.E. winds, which prevail here, upon us. Every stitch of canvas was spread to the breeze, and away we stretched on a "long leg" of a couple of thousand miles, for the coast of South America. But I will pass over this part of the log of the *Red Hawk*, and will only stop when we come to the remarks entered there on the night we saw the *Flying Dutchman*. Of course, the ship was, at that time, off the Cape of Good Hope, although a very long way to the southward of it.

The previous day had been stormy and wet, and the rapid falling of the mercury denoted that dirty weather was in store for us. During the course of the night those strange meteors, so often observed in a thunderstorm at sea, called "St. Elmo's fire," portended the continuance of the gale. This "ignis fatuus" is of a globular form, about the dimensions of a six-pound shot, and emits a pale-blue light. Two or three of them now appeared on the trucks and at the yardarms, and the sailors seemed to regard them as the sure precursors of a storm of extraordinary fury. Some of our old salts shook their heads, and whispered in anxious accents their belief that we should have a bad time of it.

Sailors, even nowadays, will buy a child's caul, and take it on board ship for good luck, and frequently they are advertised for sale in the columns of the daily papers; I see one in this day's *Telegraph*, price £10, to *mariners* and others. The superstition that has the deepest roots in the ignorant nautical mind is that relative to sailing on a Friday. This is thought most unlucky; and a very singular circumstance, in connection with this belief, once happened in America, and is related by Mr. Fennimore Cooper.

A wealthy merchant of the United States, desiring to eradicate this ancient superstition out of the minds of seamen, hit upon the following method of effectually doing so:—He had the keel of a very large ship laid on a Friday. He christened her the *Friday*. He gave the command

of her, when ready for sea, to an experienced mariner of the name of Friday, whom he took considerable pains to ferret out. Lastly, he sent her to sea on a Friday, and then congratulated himself on his public spirit. She got under weigh, accordingly, for China, with a very valuable cargo, and every one spoke of her as one of the most stately, well-found ships that had ever sailed from out of the "golden West." But, alas! the gallant barque, with her priceless merchandise, and her crew still more precious, in the eyes at least of anxious friends and relatives, was never heard of more. From that day to this her fate has been shrouded in mystery.

Another more recent instance of a like fatality is that of the *Amazon*, West Indian mail steamer, which commenced her first—and, as it proved, her last—voyage on a Friday, and which met so disastrous a termination to her career. Still another well-known case is that of the *Birkenhead*. So that, taking these instances into consideration, one ought not to laugh at the weakness of men who, at all times, go down to the sea in ships with their lives in their hands, and who may be excused for a little moral timidity when certainly want of physical courage is not one of their besetting sins.

Sailors also hold in great dread any man of the nationality of a Russian Fin: they believe these people have dealings with evil spirits, and bring destruction on a ship. During the past year I read in the *Times* an account of a murder committed on the high seas; the victim was an unhappy Fin, and his murderer was heard to exclaim, "I must kill that —— Russian Fin, or else we shall never get to London."

With regard to the strange legend of the *Flying Dutchman*, there is a tale of romance surrounding it which renders the superstition interesting to landsmen as well as to sailors. It is founded on the story of a certain Mynheer Vanderdecken, the captain of a Dutch Indiaman, who flourished some centuries ago. This Mynheer, in one of his voyages round the Cape of Good Hope, encountered—as indeed do most ships—very heavy weather. A gale blew right in the teeth of the Dutch mariner, and he could make no way. Obstinate and dogged he was, like most of his countrymen, and so, after being driven about helplessly by the tempest he swore a great and impious oath that he would double the Cape in his ship even if he beat about till the day of judgment; and so sailors tell you with 'bated breath that he is sailing about there to this day, and wherever he is, there it is blowing a heavy gale. Strange stories are recounted of the wicked Mynheer having been seen standing on the break of his poop with a speaking-trumpet in his hand. Ghastly is the

countenance of the man who dared to fight against Heaven, and round him are gathered his spectral crew, while the ship, of antique build, and of timbers and sails not of this world, is represented as ploughing along over the tempestuous sea, ever striving after the unattainable. It is at least a fine weird old legend, and in this nineteenth century, when all that is picturesque is rapidly giving place to the practical, it is worth embalming in books, or depicting on the glowing canvas of the artist. To return to my narrative.

As the night wore on, the wind freshened greatly. Sail after sail was taken in, until the ship was put under a close-reefed staysail, with the "bonnet" off. The waves buffeted the ship, and the horizon was obscured with the giant rollers, which are to be seen in the plenitude of their might nowhere so well as off this famous promontory—only excepting that other cape—"The Horn."

That night I passed on deck, my mind somewhat agitated for the safety of the vessel, for she was old and cranky, and laboured in the trough of the sea in an alarming manner. About three bells in the middle watch I went below for a minute to mix myself a stiff glass of grog to keep the cold out. I told the second lieutenant I should be on deck soon, so, leaving the poop, I made my way below with the aid of some life-lines. I was dripping wet, but, for fear of going to sleep, decided not to change any of my clothes, and not even to take off my "sou'wester." I poured out a "second mate's nip"—which I may mention, for the benefit of the uninitiated, is measured by placing the four fingers of the hand by the side of the tumbler, and filling up thereto; qualifying this with half the quantity of boiling water, I sat myself down to enjoy the cordial. After a few sips, a drowsy feeling—caused by the warmth of the 'tween decks, combined with the great fatigue induced by exposure and want of sleep—gradually crept over me. I nodded, then attempted to shake off the delicious feeling of somnolence by taking another sip, but this had a contrary effect; the inducement to doze was irresistible—in spite of every effort my head fell forward on the table, and I slept soundly. I dreamed: it was of a pirate. We had been chased and captured. My crew had all been massacred, and I alone was preserved, but it was to gratify the devilish cruelty of my captors. I was to be flogged with five hundred lashes, and then, if I survived, was condemned to walk the plank. I heard my doom pronounced, and a shudder swept through my frame. Suddenly a loud voice was at my elbow: "Sir! the *Flying Dutchman!* Come on deck!" I awoke with a start. By my side was standing the quartermaster of the watch; he held in his hand a lantern, and as the light fell upon his

face, I was struck by the horrified expression that pervaded every feature.

"What's that you say?" I answered, jumping up and staring at the man, for at first my mind was confused with *Flying Dutchmen* and "pirates," and then, without waiting for an answer, I shouted, "Beat to quarters. We'll give them a hard fight for it."

The man kept his eyes fixed on me, but did not move. "D'ye hear?" I called out. "What are you gaping at me for, like a stuck pig? Look alive and tell the first lieutenant to beat to quarters." So saying, I rushed past the fellow, who evidently thought I was demented, and mounted up to the deck.

Here I met a number of agitated faces. Turning to the lieutenant, I asked him angrily what all this confusion was about. I was now thoroughly awake, and aware also that I had confused my dream with the report made to me by the quartermaster.

The officer quickly answered: "Sir, there is a strangely-rigged ship nearing us on our port quarter, and the men declare she is the *Flying Dutchman*. I sent the quartermaster of the watch down to report the circumstance to you."

"Where?" I asked. "Point her out to me."

He did so. Turning to the point indicated, there, sure enough, a singular sight met my eyes. There was a large ship, probably 1,000 tons; antique was her build, and the fashion of her rig was of a character the like of which I had never seen before, though I remembered something of the kind in old prints of ships of a bygone age. Her stern towered high above the water and was conical-shaped, while a huge lantern, suspended over it, was swinging about—owing to the motion and the tempestuous wind. She was pitching heavily, and as she for a moment "yawed" I caught a glance of her bows and her whole length. A crowd of men could be seen on her decks when she rolled over on one side, while some figures appeared on the poop. They were all looking at our ship, but there was no movement among them. Had they been, indeed, creatures of another world they could not have looked more spectral. The whole illusion was terribly perfect in its realization of the old legend, and filled me, I own, with a feeling of horror.

"This must be Vanderdecken and his ghostly crew," I muttered to my second in command. "What could their appearance portend on this stormy night?"

The phantom ship was quite close to us when I first came on deck, but as I gazed she seemed to glide swiftly along away from us. Pitching and rolling violently, the vessel disappeared in the murky gloom of the

night, like some evil thing that sought to hide itself in congenial darkness. My men were much disturbed, and did not scruple to show their alarm as they assembled in knots and discussed the terrible visitant's appearance, not a few expressing their belief that some great calamity was impending over the *Red Hawk*. I went down among the crew, and, conversing with the first lieutenant, laughingly ridiculed the whole affair, giving it loudly as my opinion that the ship was some Dutchman from Batavia bound to Holland.

The wind freshened, and with it rose the sea. The sky darkened and lowered over the deep until it seemed positively to rest on the mast-heads ; sombre was its colour, and as the good ship ploughed her course through the opposing sea, it appeared as if she were going deeper and deeper into the innermost recesses of some vast subterranean cavern. The night grew pitchy dark, and the squalls bore down upon the ship from one quarter in terrible, fitful gusts, as though some demon, bent on overwhelming us, had gathered the four winds of heaven together and was blowing them through a funnel upon the little privateer.

Morning brought no relief, but only served to display those terrors of the tempest that darkness had shrouded from view. The horizon was limited to within a few hundred yards of the ship ; overhead lay the sky like a leaden pall, which looked in its slowly decreasing proportions as though it would gradually inclose us within its fearful embrace, like the prison cell of the unhappy wretch in that hideous Sicilian tale of torture and death which, I dare say, is familiar to those of my readers who have perused the annals of the Inquisition.

The seamen worked well, but with silence, for they could not dispel the gloom which, like a nightmare, weighed upon their minds, as the remembrance of the dread stranger of the previous night recurred to them. The storm raged on without a sign of abatement. The heavy seas broke on board occasionally and swept the decks, carrying away the pinnace, which was lashed amidships. To prevent the danger of being swamped, I was obliged at length to have part of the bulwarks stove in, to carry the water off, for the scuppers were wholly inadequate for this purpose. Towards the afternoon, as some of the watch were employed on the forecastle "flattening in" the sheet of the fore-topmast staysail, a tremendous billow, mounting its crest high above the ship, fell on board with a crash that shook every timber and spar on board the *Red Hawk*. As the resistless sea eddied down over the break of the forecastle in furious cascades it carried the ill-fated seamen with it along the decks, then as the ship gave a lurch to port, as if conscious of the great need it had to relieve itself from the vast body of

water which threatened to sink it bodily, the wretched sailors were hurried back with the wave. Away they were swept into the seething ocean, and just for a minute we could hear their agonized wail for help. One moment we saw their heads and arms struggling deep down in the black abyss formed by the receding wave, then they appeared borne aloft on the dazzling white crests of the madly-careering waters, and then in another moment they were lost to sight and sound in that chaos of warring elements.

The ship, relieved from the superincumbent mass, slowly righted herself, and met the next charge of ocean cavalry proudly and defiantly; the gallant craft rode over the billows, and seemed to trample the chargers of the enemy under foot as they glided from beneath her keel and disappeared astern. It was a fearful and unequal battle the *Red Hawk* waged, for she was leaking badly. Her old wounds opened, and the water made its way freely into the hold. The carpenter came aft to me, and reported that the ship showed signs of breaking up. I sought to argue him out of this belief, and charged him by no means to apprise the crew of the state of affairs. The men worked nobly and uncomplainingly, though almost worn out with fatigue; a large number of them also had received injuries through falling spars.

So night closed in: a fearful night it was, and little hope had any of us, officers or men, including the veteran carpenter, an old warrant officer in the navy, that the ship would weather out the night. I remained on deck. About seven bells in the first watch (half-past eleven) a heavy sea again broke on board, carrying away one of the cutters from the davits. As the ship, thrown nearly on her beam-ends, and labouring heavily, returned upon an even keel with a terrific jerk, a cracking noise was heard aloft. I looked up and saw it was the fore-topmast that had gone; tottering and swinging about like a drunken man, it fell to leeward. The main-topmast for a moment resisted the great strain brought upon it, but ineffectually; it succumbed at length, and wrenched off the head of the mainmast a little below the cap. Of course the mizen-topmast could not stand alone, but shared the fate of its fellows, and so, in as short a time as I take to tell it, the ship was involved in wreck and ruin. Some of the falling spars whirred through the air close to where I stood, and the whole *débris*, carrying all its accompanying mass of gear and top hamper, fell overboard.

(*To be continued.*)

The Art of Making Fireworks.

By CHARLES W. QUIN.

BEFORE commencing the second part of our article * on fireworks it will be as well to remind our readers that the intimate mixing of the various ingredients with each other is a matter of the greatest importance, for upon it depends entirely the success of any pyrotechnic display. It is performed by throwing the materials to be mixed into a paper or card tray, and stirring them together with a little cardboard shovel. This operation should take ten minutes at least, according to the amount of composition you are working with, otherwise a proper mixture cannot be made. No composition should ever be put into a case until it is tested. This is done by laying an even train of it along a piece of waste board, and firing one end. If it burns evenly the mixing is properly performed; if, on the contrary, it splutters here and there, or goes out in the middle, it must be worked at with a little more patience. Recollect, once for all, that good materials are one half of the battle, thorough mixing is the other half. The proportions, given in any of these receipts, may be halved and quartered if necessary. The drachm troy is a good standard to take, but halfpence or farthings answer the same purpose.

Bengal lights are the next simple firework that we shall describe. They may be made by filling one-ounce pillboxes with brilliant or coloured compositions, and closing the case by pasting touchpaper round the opening and twisting it together.

The following compositions are better adapted for Bengal lights than those given for lances. In the Bengal light it must be remembered that a large surface of the composition is burning in contact with the air instead of a small one. The materials used are consequently burned under slightly dissimilar conditions.

* See "Routledge's Magazine for Boys," No. 47.

White Bengal lights may be made from composition Nos. 1 or 2.

No. 12. Crimson.

Nitrate of Strontia	29 parts.
Sulphur	13 „
Chloride of Lead	2 „
Sulphide of Copper	10 „
Shellac	1 „
Chlorate of Potash	12 „

The remarks appended to No. 4 will apply equally to this composition. No. 5 may be used if a rose-coloured fire is desired, but it is better to increase the proportion of chlorate of potash to 9 parts.

No. 13. Green.

Nitrate of Baryta	27 parts.
Sulphur	8 „
Shellac	2 „
Chloride of Lead	2 „
Chlorate of Potash	9 „

No. 6 may also be used, but is rather expensive.

No. 14. Yellow.

Nitrate of Baryta	24 parts.
Sulphur	8 „
Bicarbonate of Soda	4 „
Resin	2 „
Chalk	1 „
Chlorate of Potash	12 „

No. 15. Orange.

Nitrate of Strontia	90 parts.
Sulphur	25 „
Lampblack	5 „
Oxalate of Soda	6 „
Chlorate of Potash	16 „

No. 16. Blue.

Nitrate of Baryta	20 parts.
Sulphur	33 „
Oxychloride of Copper	18 „
Sulphate of Potash	17 „
Chloride of Lead	2 „
Chlorate of Potash	2 „

A row of Bengal lights of different colours connected by a quick match forms a capital beginning to a display of fireworks.

Squibs and serpents may be made in cases similar to those used for lances, but the number of turns in making the case should be increased to six or seven. They are made of various sizes, according to circumstances ; half an inch in diameter by six inches in length is a very good ordinary size. Tamp the ends with clay as directed for lances, or choke them ; tie tightly with twine and dip the ends into melted resin. The operation of choking is performed in the following manner :—

Take a piece of stick slightly smaller than your former, and of about the same length, and round off the end of it. Take another piece of about the same length, and treat it in the same manner: bore a hole in the latter, and insert tightly a piece of copper wire about one-eighth of an inch thick, leaving about half an inch projecting. Bore a corresponding hole in the first piece for the admission of the wire, and the apparatus is complete.

The choke-former is shown in section, in fig. 1, with a case on it ready for choking. Take a piece of whipcord a couple of yards long, and fasten one end to a post or a nail in a wall, and the other round your waist. Twist it once round the case at the junction of the two halves of the choke-former, and by gradually working the case round and round on its axis you will be able to form a neat choke in a few minutes. Withdraw the choke-former, and you will have what may be termed an "open choke ;" by continuing the operation you will entirely close the aperture left by the wire of the former, and obtain what may be called a "close choke." This is shown in fig. 3 ; fig. 2 showing the "open choke." Tie a piece of twine round the choke, making several turns, and dip the end into melted resin. Case-choking is a very simple operation, and takes a tenth part of the time to perform that it does to describe.

Having closed your case either by close-choking or tamping, pour in an inch of corn-powder by means of the funnel and wire, and ram down tightly. Insert the wired half of the choke-former in the case, pressing the wire down into the powder to form an open choke, as before directed ; tie neatly, and withdraw the former. Pour in a pinch or two of meal-powder, and ram down tightly, after which fill up with squib composition to within half an inch of the top, where an open choke is made and tied. The remainder is filled with squib composition, and capped in the usual manner. The open choke over the powder is to increase the noise of the explosion, the one near the mouth is to increase the motive power of the squib when thrown into the air. Squibs are often made without

choking at all, but they are much inferior to those described. The choke near the mouth must not be less than one-eighth of an inch in diameter, or else the case is apt to burst from the force of the burning composition. This defect can only be discovered by experiment. If the hole in the choke prove too small, it can easily be made larger by untying it, and enlarging the aperture with a pointed stick. There is much confusion about the names "squibs" and "serpents," either word being applied by different authors and makers to the firework just described. The true serpent, however, is made in the following manner:—Close-choke your case, and tamp with a quarter of an inch of clay, to make assurance doubly sure; ram with squib composition until within an inch and a half of the end; open-choke, ram in an inch of corn-powder, and close-choke. It will be seen that this process is the reverse of the former, as we begin filling at the mouth instead of the bottom of the case. When complete, bore a hole one-eighth of an inch in diameter with a *brass* bradawl half an inch below the tamp; insert a piece of quick match, and cap as usual. The hole from which the fire issues in this instance being at the side, the firework will perform a series of serpentine gyrations when thrown into the air. Sometimes the corn-powder is placed in the middle, the two ends being filled with composition, and bored at opposite sides. Fig. 4 represents the section of a squib, Fig. 5 that of a serpent. The double-ended serpent need not be shown. When serpents are used in the heads of rockets, they are frequently made without the charge of corn-powder.

The following compositions may be used indifferently for squibs or serpents. They are all good in their way; but it is just as well to fill a case with each, and burn them together for comparison's sake.

Nos. 1, 2, 3, and 4.

Meal-powder	4 ...	10 ...	32 ...	18	parts.
Steel Filings	1 ...	1 ...	5 ...	0	„
Charcoal	0 ...	1 ...	0 ...	0	„
Nitre	0 ...	0 ...	1 ...	1	„
Sulphur	0 ...	1 ...	1 ...	1	„
Cast-iron Filings...	0 ...	0 ...	0 ...	5	„

Nos. 3 and 4 serve well for pin-wheels.

Golden and *silver rains* are made by tamping cases similar to those used for lances, and filling with one of the following compositions. The mouths are closed with meal-powder made into a paste with spirits of wine. They should not be driven very tightly. They may be stuck upright in the ground, or in a piece of clay placed on a post, or thrown

into the air. In the latter case they should not be made too long. Except when used on the heads of rockets, they are what a Yankee would call "a kyinder one-hoss sort of firework."

Golden Rain Compositions.

Nos. 1, 2, and 3.

Meal-powder	6	.....	8	.....	5	parts.
Nitre	1	.....	0	.....	1	„
Fine Charcoal	2	.....	3	.....	1	„

Silver Rain Composition.

Nos. 1 and 2.

Meal-powder	10	.....	16	parts.
Nitre	13	.....	1	„
Sulphur	2	.....	1	„
Zinc Filings	20	.....	0	„
Steel Filings	0	.....	5	„

We now come to the Roman candle, a species of firework that will tax the young pyrotechnist's skill and care to the utmost. The Roman candle consists of a long, strong case rammed with brilliant fire and stars, with small charges of corn-powder beneath them, being inserted at intervals. The case may be regarded in some sort as a kind of gun, or mortar, from which luminous stars are fired instead of shot; it must, therefore, be made of great strength in order to withstand the power of the explosion. They are made of all sizes; and their calibre, like rockets, is measured by the size of the leaden ball they will contain. Thus, a 2-ounce Roman candle does not mean one that will contain 2 oz. of composition, but one of the same diameter as a leaden ball of that weight. The 2-ounce size is the one that we should recommend as being the most manageable. It is made on a former 18 inches long and five-eighths of an inch in diameter.

Take a sheet of imperial two-sheet pasteboard and cut it into six pieces, as shown in fig. 6. Each piece will measure about 14 inches by 7 inches, imperial pasteboard being about 28 inches by 21 inches. Next cut a sheet of imperial 70 lb. brown paper into two pieces, as shown in fig. 7, each of which will measure about 14 inches by 21 inches. Take one of the pieces of pasteboard and roll it round the former, taking care to moisten it thoroughly with paste. Having worked it well with the rolling-board, undo about an inch and insert the edge of the strip of brown paper which you have previously covered with paste; roll it up tightly, using the rolling-board to squeeze out as much of the super-

fluous moisture as possible. You must use your judgment as to the amount of paste necessary for making a good case. If you are too generous you will make your pasteboard and paper too damp, and the case will most likely twist in drying; if, on the other hand, you use too little, it will not be strong enough to withstand the force of the powder. Of course the first round of pasteboard must not be pasted, otherwise it will stick to the former. Slip the case carefully off the former, and place it aside to dry. This will take three or four days in summer, and a week in winter. You may if you like place the cases near the fire, but not too near, otherwise they will warp. When quite dry, cut them into lengths 14 inches long, and ram the ends with half an inch of clay, taking care to beat each ladleful down firmly, with ten or fifteen blows of a mallet.

Having made a stock of cases, you must next set to work to mix the composition and make the stars. There are a large number of compositions recommended by different authors; but the two following will be found to answer their purpose admirably :—

Nos. 1 and 2.

Meal-powder	4	20	parts.
Nitre	8	5	„
Charcoal	3	4	„
Sulphur	3	7	„

In No. 2 the charcoal may be replaced by steel filings, which, of course, will increase the brilliancy of the fire.

The stars for Roman candles are made by slightly moistening one of the following compositions with ordinary shellac varnish, and pressing it into a mould, as shown in fig. 8. A is a wooden former, half an inch in diameter, into the end of which is inserted a piece of copper wire one-eighth of an inch thick, and projecting a quarter of an inch. B is a brass tube, half an inch in diameter inside. The tube is placed firmly on a flat surface, the damp composition thrown into it, and the former A inserted with all the pressure you can exert. The object of the projecting wire is to limit the size of the star to half an inch in thickness, as well as to pierce a hole in its centre. Having compressed your stars, lift up the whole, and push out the composition with the former. Your star will now resemble a little millstone a quarter of an inch thick, half an inch in diameter, and with a hole in its centre of an eighth of an inch. When perfectly dry, insert in the hole a piece of quickmatch, leaving an end on each side, which you turn down on the star.

The following compositions are selected from amongst a large number :—

Nos. 1 and 2. WHITE.

Nitre	8	3	parts.
Charcoal	1	1	„
Sulphur	3	1	„
Sulphide of antimony	2	0	„
Sulphide of tin	0	1	„

No. 3. GREEN.

Chlorate of Potash	2	parts.
Nitrate of Baryta	1	„
Sugar	1	„
Chloride of Lead	1	„

No. 4. BLUE.

Chlorate of Potash	48	parts.
Sulphur	21	„
Oxychloride of Copper	21	„
Chloride of Lead	4	„
Shellac	1	„

No. 5. YELLOW.

Chlorate of Potash	4	parts.
Nitre	2	„
Sulphur	2	„
Bicarbonate of Soda	2	„
Sugar	1	„

For red and crimson stars the composition recommended for lances will serve excellently.

You must take great care to allow the stars sufficient time to dry before using them. It is as well to insert the quickmatch in the star the last thing, as the open hole materially assists the drying. In order to distinguish between the stars, it is a good plan to fasten to them with a touch of gum a tiny morsel of coloured paper.

Everything being ready, pour into the case enough composition to occupy half an inch, and ram it down with ten smart blows of a mallet; then ram down another half-inch in the same manner. The first charge of powder, 60 grains, must now be poured in and rammed down. Upon it is placed a piece of touchpaper half an inch square, and, lastly, the first star. Next throw in another square of touchpaper, and ram two separate half-inches of composition with ten blows of the mallet to each.

It is better to divide the inch of composition into two than to ram it all at once. On the top ram in the second charge of powder, 20 grains; and then the second star, until the case will hold no more, of course finishing with a charge of composition. The charges of powder diminish as they get nearer the mouth of the case, in the following order:—1st, 60 grains; 2nd, 20 grains; 3rd, 15 grains; 4th and 5th, 12 grains; 6th and 7th, 10 grains; 8th, 8 grains. No pains should be spared on the exact adjustment of these charges of powder, for on their proper relative proportion will depend the beauty of the display of stars. The filling being completed, the mouth of the case is primed and capped with touchpaper in the usual way. If the cases are made pretty thick they will serve over again.

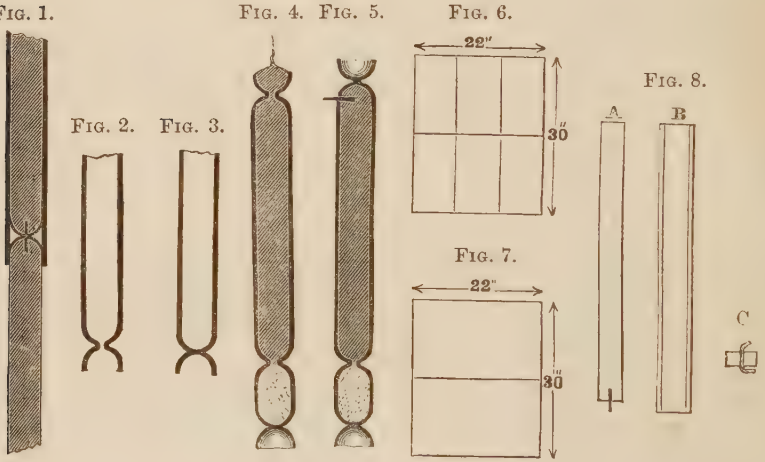


Fig. 1 is a firework-case slipped on two formers with rounded ends, which are joined together by a short wire.

Fig. 2 is a firework-case half choked at the bottom.

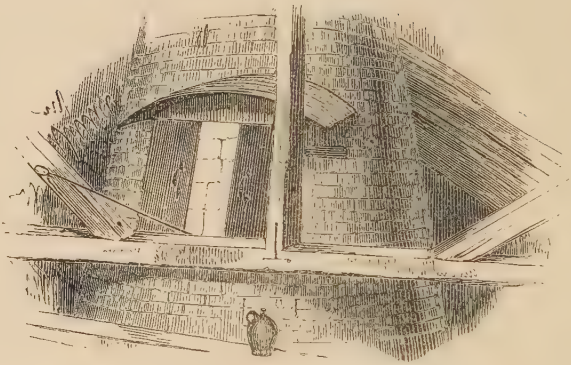
Fig. 3 is the same, completely choked.

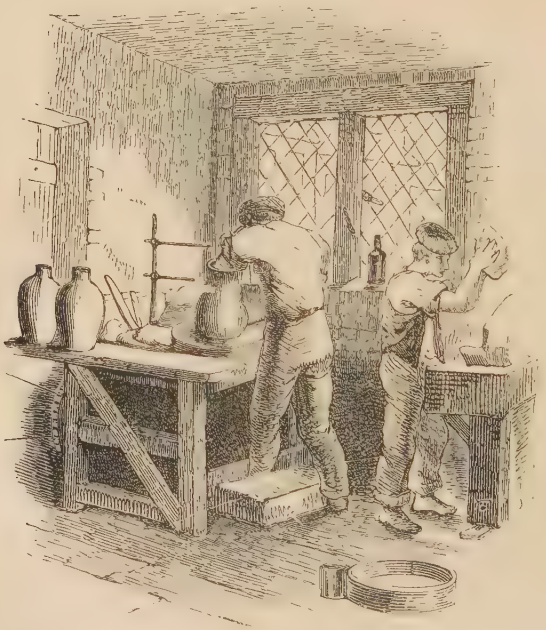
Fig. 4 is precisely similar to Fig. 5, but the *top is only half choked.*

Fig. 5 is a squib completely choked at the bottom, half choked in the middle, and completely choked at the top. The lower part is filled with gunpowder, the upper with composition; a tail of touchpaper being inserted in the side.

Figs. 6 and 7 show the method of cutting the paper and pasteboard.

Fig. 8. B is a brass tube, and A is a wooden former that fits into it. A is half an inch shorter than B, and is provided with a wire at the end half an inch long. It is used for moulding stars, which, when made, are like little cheeses with a hole through them. In C a piece of touchpaper, which has been passed through the star and turned over top and bottom, is shown.





POTTERY.

Trades connected with Science and Art.

By THOMAS ARCHER.

POTTERY.

WE now come to a trade some records of which extend as far back as the history of the human race. We can scarcely imagine any tribe so barbarous as to be without vessels formed of clay, and dried in the sun, or baked in the fire, and the most civilized nations have regarded the manufacture of finer kinds of pottery as one of the most useful, as well as the most beautiful, of the arts. The remains of pottery of various degrees of excellence are discovered wherever anything indicative of human life is dug up among the relics of past ages. The potter's art was among the very earliest employments of mankind, was one of the primitive trades, and is as important to-day—when porcelain is moulded in such a variety of elegant forms for tea-services—as it was when, ages ago, at the remoter villages of the East, the shepherdesses carried water from the wells in great earthen pitchers, or the camels on their desert journey bore huge jars slung across their backs.

The references to the potter and to potter's work in the sacred Scriptures are so numerous that we need not quote them here, and the one great implement of the potter's art—the "throwing wheel,"—on which he forms the vessels of clay, has been very little altered since the days of Moses.

The clay used for pottery is largely mixed with flints, powdered in a mill after being burnt in a kiln; and the fineness of the work depends greatly on the kind of clay that is provided. The white clay is principally obtained from Newton in Devonshire, and Pool in Dorsetshire, while in the manufacture of what is called china or porcelain a substance called kaolin, or china-clay, is employed. This substance is produced by the decay of the felspar or granite which is undergoing

decomposition, and is mostly brought from St. Austell, in Cornwall, and the southern side of Dartmoor, in Devonshire, where the decomposing

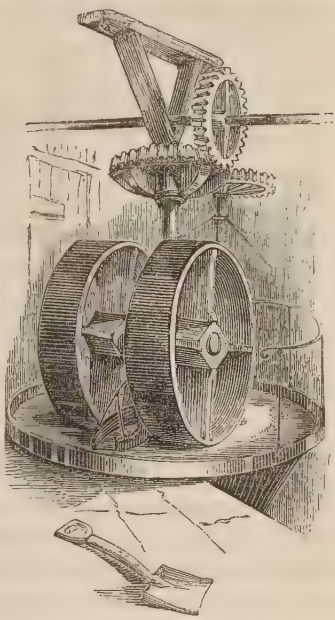
Pug Mills.

rock is washed until the finer portions of the clay are suspended in the water, and afterwards allowed to settle. The flints are procured from the chalk districts, where they are found in great quanities.

The clay is prepared by being mixed with water, by means of machinery, in what are called "pug mills," until it acquires a creamy consistence. The flints are first heated till they are red, then thrown into cold water to render them more brittle, afterwards stamped and crushed through a grating, and finally ground in a mill formed of hard stone. Their powder is then mixed with water in the same manner as the clay, and when the particles have subsided, the ground flint and ground clay are mixed together in such proportion that the flint paste is about one-fifth part of the clay paste. The mixture is then sifted through sieves of various degrees of fineness, in order to get rid of the grit, and to mingle it more intimately.

The mixing is effected in vats sunk in the ground, and when the substance, which is called "slip" or "slop," is diluted with water until a pint of it weighs from twenty-four to thirty ounces, according to the work required, it is pumped into the sieves. When thoroughly mingled it is once more pumped on to a "slip kiln," the bottom of which is formed of large, flat firebricks, resting on hot flues, passing from the furnace to a large chimney.

These flues evaporate the water from the slip, which is heated until it becomes thicker; but, as it is in a boiling state, and therefore full of air-bubbles, it has to be beaten or "slapped" until all the air is forced out of it, and the entire mass is smooth and even in texture.



First Process.

The utmost care is necessary in mixing the materials in the "slip-house," since the beauty and perfection of the ware depend upon the proper combination of the ingredients, and on the proportions of various kinds of clay, to produce the required colour and hardness. To some of the finer sorts, where great hardness and density are required, powdered granite is added, while to produce drab, brown, and black ware manganese and protoxide of iron are mingled in small quantities. There are other colours which require still greater skill, since oxide of cobalt gives a blue, or protoxide of chrome a green tint, while a kind of jasper-like white ware is made of vitrifying or glass-like material.

The clay, having been prepared, is carried to the workshops, where it is received by the potters, and, if articles of a round shape are to be formed, the operation is performed by the "thrower."

The thrower's or potter's wheel is a kind of simple lathe with an upright spindle, having a small round table at the top. At this table the "thrower" sits, and receives a lump of clay from a boy or a woman, called the "baller," who has made the ball, or lump, of a proper size, and throws it upon the table, which is made to revolve by another boy who turns the wheel, keeping his eye all the time on the "thrower," and regulating the speed of the lathe with the greatest accuracy. The first thing the "thrower" does is to gather the clay up in an even pile, and then to depress it with his hands into a flat cake, until the motion of the wheel has drawn it into a perfectly round form. He then opens it into a hollow shape with his thumbs, and either draws it out or presses it in until the required form is given to it, the motion of the wheel always preserving its roundness. It is then cut from the table with a "wire," and is ready to be carried to a room heated by stoves, where it hardens.

When a number of articles of an exact size are to be made, a gauge is fixed so that its point just touches the top edge of the vessel as it revolves on the wheel, thus regulating the height and diameter at the same time.

Wire.

Gauge.

Turning Tools.

Moulds.

If we require only a round jug, jar, vase, bowl, basin, or "stone bottle," without handles, pattern, or ornaments, this is how it is made, and all that is required is to take it from the drying-room to a kiln, where it is baked for a couple of days; it is then removed; but, as it is porous, and water would still filter through it, it must be glazed or dipped in a liquid containing white lead and flint, which adheres to the surface; it is then placed again in an oven or kiln, where the heat melts the "glaze" with which it is covered, and so produces a thin coating of transparent glass.

But most articles are ornamented in some way or other; and, in order to improve their shape, mouldings, beadings, and other additions are made to them; they are taken from the drying-room to the "turner," who places them on a lathe similar to that used for turning wood, and with his "turning tools" shaves away the clay to a proper thickness and works the various mouldings, &c., afterwards polishing the article with a steel burnisher. Sometimes he adds to the surface a coating of various coloured clays, blended so as to produce a marbled appearance, and this kind of work is called "dipped ware." The handles and spouts are prepared in moulds, and afterwards put on by the "handler," who sticks them in their proper places with "slip" or liquid clay. Such ornaments as are intended to be in "relief"—that is, standing out from the surface—are made in moulds, and are afterwards stuck on in the same way.

Supposing, however, that we want "flat ware," such as plates, small bowls, cups, basins, and saucers, a different method is employed. They are made at a revolving table, like that of the thrower, but with this difference: on the table is a mould of the shape required for the inside of the article to be formed. The workman stands at this table, which is put in motion by a horizontal pulley turned by a boy. At his left hand is a mass of clay, and his "batting-block," made of plaster, while just behind him is the stove-room, where the moulds are arranged on the drying-shelves. When he begins to work, he cuts his clay into pieces of a certain length with the "wire," and tears off a piece from one of these strips, which he beats out then with his mallet on the batting-block. He then polishes the surface by sliding the blade of a long thin knife across it. All this is done so quickly that you can scarcely follow the operation with your eye; but it has given time for the boy, who is generally barefooted, to fetch the mould, place it on the wheel, and set the machine in motion. The man then places the clay upon the mould, pressing it down with his hand as it revolves, and also forcing upon it an earthenware tool, which shapes the bottom of the article. The superfluous clay which is squeezed out at the edge is cut off, and the moment the modelling is completed it is taken away, mould and all, by the boy, who places it on the drying-shelf, and returns with another empty mould at the precise moment that the workman is again ready with his clay. When the plate, bowl, cup, or basin is sufficiently dry it is taken from the mould, after the bottom of it has been polished, and the edges are then smoothed and polished with damp leather.

These operations are conducted with such wonderful quickness that the visitor to the potteries is amazed, and can the more readily understand how ordinary earthenware can be produced at a low price; but such vessels as are of an oval or irregular form require an altogether different process, since only round articles can be made by means of the wheel. All pottery that is not round must be made by pressing the clay into plaster moulds of the required form. These moulds are made in two parts, and each part is separately filled by laying in a cake of clay which has been beaten out to the proper thickness on a wet plaster block. This is pressed into the mould by dabbing it with a ball of wet sponge, or squeezing it into the more angular parts with the fingers; it is then smoothed with a damp leather or a piece of horn, and the two moulds are brought together, each of them of course containing one half of the jug or other article to be made. The two halves are joined together with a long strip of clay, which is carried all round the profile

or outer shape of the mould, and worked down quite smooth on the inner surface. It is then carried to the stove-room, and when the mould has absorbed the moisture, and the clay has become hard, the article is broken out of the mould, the seam made by the joining-strip of clay which projects a little is removed by scraping and burnishing with a piece of wet horn, the handles, &c., are attached, and the article has only to be burnt and glazed. This process is called "hollow-ware pressing."

Some other kinds of vessels, such as vases and articles of very irregular shape, are "cast"—that is, the thin "slip" or "slop" of clay is poured into a dry plaster mould, which rapidly absorbs the water, so that the clay in contact with the surface of the mould becomes solid by losing its moisture; the slip that remains is then poured out or removed with a syringe, and a little thicker slip is poured in, until a sufficient coating is obtained, when this, also, is withdrawn, and the mould is put into a stove to dry. Only very thin or light goods are made in this way.

Whatever may be the method employed, however, the pottery has all to be removed from the drying-stove, and baked in the biscuit-oven. This oven is a cylindrical structure of firebrick, surrounded with bands of iron like a hooped cask, and is about fifteen feet in diameter, and seventeen feet high. Nine fireplaces, or mouths, are built round it, and from these short chimneys ascend within the oven. The flames are conducted by flues ranging from the mouths under the hearth of the oven, and converging to a pit in the centre, from which the flames ascend through the midst of the oven, so that the heat is pretty equally distributed, though the outer portion of the oven receives the greatest force of the flames from the mouths or fireplaces. It is in the outer range of the oven, then, that the stronger and less delicate goods are placed, while the finer articles occupy the centre. The ware, before being placed in the oven, is packed in "saggers" or strong boxes, something of the shape of hatboxes, made of coarse crucible clay. These saggers are placed one upon another, so that each one covers and protects the goods in the one beneath it from immediate contact with the smoke and flame. When the oven is filled, the doorway is built up with firebrick, and "butted," or sealed up, with compost. A loose brick, however, is left at the front and back of the oven, where the *trial pieces* are placed, in order that the workmen may watch the progress of the baking. These trial pieces, or "pyrometers," are hoops of clay, called "Egyptian," which when

Sagger.

unburnt are red, but during the process of baking change by degrees to a deep black. By watching these, and the degree of change that they are undergoing, the fireman can regulate the furnaces. For the first few hours only a drying heat is maintained, but afterwards the oven is brought up to a white heat. In about forty-eight hours the operation is complete, the oven is cooled, and the saggers are taken out, that the ware may be thoroughly examined. It is now hard and porous, and in that stage is called "biscuit," perhaps from its appearance, but possibly from the original meaning of the word biscuit, which, as you are no doubt aware, is from the French, and signifies "twice cooked."

At present we have not said a word about the pattern which adorns most even of our ordinary earthenware, and almost all our finer porcelain or china.

Let us suppose, then, that one of the pieces taken from a sagger, when it is removed from the oven, is a fine china vase made of the purest clay, while another is an ordinary dinner-plate. Each of them will have to go through a similar process—that is to say, will have to be "printed" by means of transfer papers impressed from copper plates. These copper plates are engraved with the required pattern, and if one colour only is wanted, the printer mixes that particular colour with oil upon his hot stove, and, after filling the engraving with it, takes off an impression by means of the ordinary press upon tissue paper, first prepared with a solution of soap. As soon as this paper is printed the printed pattern is cut out with a pair of scissors, and handed to the transferrer, who carefully places it upon the piece of china requiring the pattern. This, being porous, absorbs the oil, and so holds the paper very tight, so that it would be difficult to remove it. The piece of pottery, with the paper adhering to it, is next passed to a woman, who, with the end of a roll of flannel, bound with twine, rubs the print with such force as to work the ink well into the "biscuit." This operation completed, the vase or the plate, covered with the paper wherever the pattern is to be transferred, is placed in a tub of water; the paper is carefully wiped off with a sponge, and every portion of the engraving is found to have been accurately transferred to its surface. When various colours are employed in the same piece, each colour frequently requires a separate engraving-plate and a separate operation. The oil with which the colour is mixed is a very thick and viscid substance, made with linseed-oil boiled with litharge, resin, or Barbadoes tar, and the various hues are obtained from oxide of cobalt for blue, smalts and manganese for lilac, and various preparations of tin, manganese, antimony, lime, and iron for the other colours. After receiving the

pattern the ware is dried, and afterwards heated in a large "muffle" or oven, for the purpose of drying in the colour and burning out the oil, which would injuriously affect the glazing. The biscuit ware, then, only requires glazing, and for this purpose is taken to the "dipper," who dips each piece into a vat containing the mixture already mentioned. The porous clay of the "biscuit" absorbs the water and leaves the glazing material evenly distributed on the surface in a wet powder. As he takes each piece from the vat the dipper gives it a circular shake, which throws off the superfluous moisture, and serves to distribute the glaze equally over the surface. The ware is then again placed in "saggers," which have been washed inside with a glazing mixture of lime and clay. Care must be taken not to allow one piece to touch another, or the melting of the glaze would cause them to stick together. They are then sent to the glazing-oven, which is about one-fourth the size of the biscuit-oven, and the process is complete by the melting of the glaze. They are afterwards examined, and any slight projection of the glaze is chipped off by steel chisels, or removed with files.

In the manufacture of glazes for fine pottery it is necessary to make it of the same colour as the article to be covered.

We have said that the china vase and the ordinary dinner-plate have to undergo the same process of printing in order to receive their ornamental patterns, but it is necessary to mention that some of the most exquisite china and porcelain are ornamented by artists who paint the design upon the biscuit. So much improvement has been made during the last few years in the art of painting china, and in obtaining depth and delicacy of colour in the body of the article, that many of the former objections to this method have been removed, discoveries having been made to enable the tints to stand the heat of the glazing-oven with comparatively little injury. Articles painted by hand are, of course, expensive, and the more delicate kinds are finished with so much difficulty that examples are comparatively rare. The real china, the finest examples of which were originally brought from the East; the beautiful ware manufactured at Dresden, old examples of which are now very scarce and of great value; the true porcelain made at the old Royal manufactory at Sèvres; and the English "Chelsea china"—frequently consisting of finely modelled figures,—are among the most remarkable examples of the potter's art.

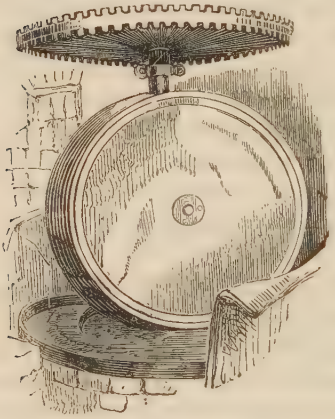
Porcelain is, of course, a finer kind of pottery, in which the clay is so mingled with silex, or flint, that it becomes vitrified or is rendered glass-like. This kind of porcelain when coloured by metallic ingredients is called "stone china," but when it is quite white and translucent it is

simply called "china," and is either "hard" or "soft." Until lately the Oriental, French, and German china has been made of china clay, felspar, sand, and selenite, and when taken out of the biscuit-oven was very porous and opaque, since the first baking was only at a moderate heat. After being dipped in a fine glaze of ground felspar and alkali it was placed in a furnace at a heat so intense that it not only melted the glaze, but incorporated it with the clay, which became itself vitrified in the process, and came out like a bright, transparent, polished gem. The worst part of this process was the necessity of seizing the very moment of perfection for removing the "saggers" from the oven. A few seconds over-baking and the goods melt or collapse under the fierce heat.

The English practice was to manufacture soft or "tender" china, in which the clay was fully "vitrified" in the process of baking, the shape of the articles being preserved by imbedding them in flint powder. They are afterwards glazed at a lower temperature. It need scarcely be remarked that the great manufactories of china and earthenware in this country are in that part of Staffordshire known as the "Potteries," where the whole art was so much improved by the celebrated Mr. Wedgwood, above a century ago, that a prosperous trade was soon established, and in a place which was once a mere stretch of barren country there are now nearly 300 kilns, giving employment to above 100,000 workpeople.

It is, perhaps, necessary in speaking of glassworking and pottery to notice one art which is closely allied to them both—that is to say, the art of enamelling; one which was practised in early ages by the Egyptians, and later still by the Romans, who were evidently well acquainted with it at all events in the time of the Lower Empire. Enamels may be called substances capable of being vitrified by the action of heat, and are either transparent like glass, translucent like fine china, or entirely opaque. The basis of all enamels is a white, transparent glass, and while by the addition of colouring metallic oxides it is converted into transparent enamel of various hues, tin and antimony make it into an opaque and colourless enamel. There is also a very white material called glass enamel, which is made completly opaque by a mixture of arsenic, and is used principally for the dials of clocks and watches and for some common ornaments for the mantelshelf. There is, therefore, transparent and opaque enamelling. The first process is that of which we may see examples in the ornamentation of watches, snuff-boxes, and some articles of jewellery, where the engraved patterns of the gold show brilliantly through the richly coloured enamels with which it is encrusted, or where finely executed paintings in enamel are

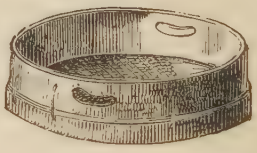
executed on transparent grounds. Opaque enamelling is employed for watch and clock dials and for plates for pictures. For this purpose the enamel is broken with a hammer into small pieces, ground with a pestle and mortar formed of agate, laid evenly on a plate of copper or of gold prepared for its reception, and passed through the furnace, where it is vitrified and made to adhere firmly to the metal. When the enamel plate is prepared the artist proceeds to paint his picture in a manner similar to that pursued in painting in oil or water colours; but, instead of waiting for one coat of colour to dry before he puts on another, the work is passed through the fire after each coat, and so the colour is rendered imperishable. The base of these colours is pure glass, and the colouring matter metallic oxides.



Crushing Broken Ware.

Trowel.

Scales.



Sieve.

Velocipedes.

VELOCIPEDUM VARIORUM.

IF one half of the suggestions which have been made for the use and improvement of velocipedes were turned to practical account, we should have air, earth, fire, and water vehicles in multifarious variety. Whether that famous six or seven wheeler, which is to carry a family party by a treadle movement, will ever become a reality it is difficult to say. The performance, to say the least of it, would be of a very cranky order. Wind velocipedes are nearly as old as the hills. They have been tried with flat and revolving sails, combining in the latter instance a land boat and a windmill, all of which are duly described in the "Sailing-boat," by Mr. H. C. Folkard, and the results chronicled, even to the frightening of a farmer's wife and upsetting her in a ditch.

The marine velocipede, the podoscaphe, or *vélocipède marin*, which is the last new Parisian notion, has been tried for years with some success. Those on the lake of the Bois de Boulogne are "formed of a couple of canoes covered with canvas and joined together by two iron bars, between which is a paddle-wheel, put in motion by means of two pedals placed at the extremity of the arc." There was a talk that some enterprising gentleman would cross the Channel on one of these machines, but he has not yet done so. Some of the marine velocipedes suggested are manumotive machines, the movement of which is analogous to turning a mangle. Machines of this kind have been used for years without any great results being achieved.

Several suggestions have been made with respect to the application of steam to velocipedes. It might, and perhaps will be done; but then

they will cease to be velocipedes. Read some of the latest ideas on the subject. The vehicle is to be constructed to carry two.

"The means for working consists of a pair of oscillating cylinders, situated behind the carriage, driving a small cranked stage, having upon it the two driving-wheels. Steam is supplied from a small boiler, located in the front, and carried through the steam-pipe into the trunnion-box between the cylinders, and after performing its work, finds its passage into the exhaust-pipe in the usual manner. The exhaust-pipe is in connection with the funnel of the boiler, the latter being located underneath the carriage, so that no inconvenience may arise from smoke in front. The heat, too, from the boiler may all be avoided by placing around it some non-conducting material. A handle where-

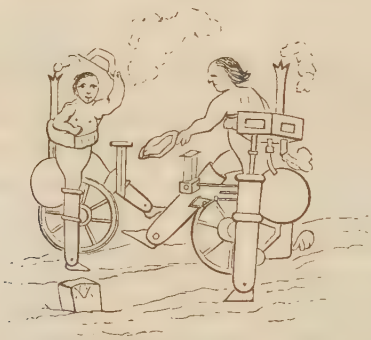


Fig. 28.

by the brake may be applied is in a convenient position, and may be used to one or both wheels, and the guide-wheel, worked by gearing, is so placed that it may easily be handled by a passenger, who has the opportunity of transforming himself (for the time being) into an amateur engine-driver and stoker. Coals are carried in a bunker, situate in front of the boiler."

The proposers and inventors may console themselves by knowing that in Mr. Stewart's pleasant "Anecdotes of the Steam-Engine," published forty years ago, there is a little vignette, a similar contrivance, of which fig. 28 is a *fac-simile*. The design seems to ridicule Messrs. Baynes, Dumbell, Tindal, & Co. A reference to the "Aids to Locomotion," issued by the Patent Office, will show that the idea dates at least from 1813.

The American ice velocipede (fig. 29) is a much more sensible contrivance. It is literally skating by means of machinery. The design originally appeared in *Harper's Weekly*, and the machine is intended to

be used on ice or frozen snow. The driving-wheel is armed with sharp points to prevent the possibility of slipping, which proved so fatal to

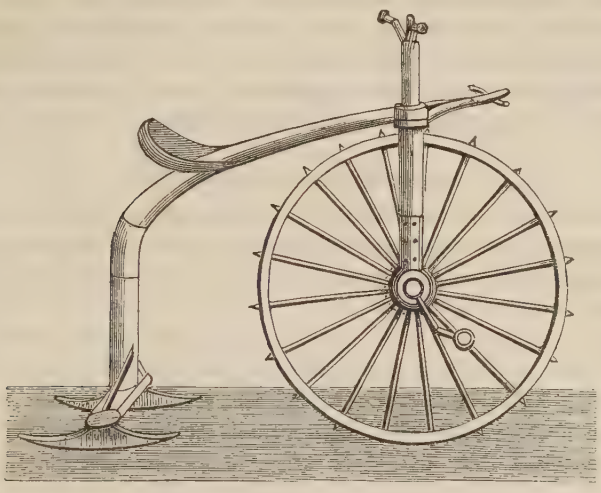


Fig. 29.—American Ice Velocipede.

M. Dreuze's machine. The hind wheel is replaced by a pair of gigantic skates or runners, similar to those used in sleighs or ice-boats. It is hardly likely to have a fair trial in England.

This vehicle, with its one wheel, seems to have tickled the fancy of a Mr. John St. Leger Partridge, who has, or is, going to bring out the "Victorine," or one-wheeled velocipede. *Bell's Life* informs the public, however, that this gentleman's labours in this direction have occupied the better portion of the last fourteen years. It is his intention, we are told, "to test publicly the merits of his machine by an open trial. To this end he issues a challenge to all comers to a race of velocipedes, of any model, to some town not more than a hundred or less than fifty miles from London. He further offers to give one mile start for every twenty in the course decided on, the road selected to be a fair average one as to ascents and descents. This 'sensation' match will doubtless be watched with much curiosity, as the Americans have attempted progression *en vélocipède* with positively one wheel." This Mr. John St. Leger Partridge must have taken a lesson out of Mr. Dumbell's idea, which is a spherical ball, with compartments; or he must have adopted a squirrel-cage, or the clown's idea of riding on a barrel. The American idea is a combination of the two.

Far more useful and interesting are the various forms of a child's

velocipede. The Prince Imperial, on the occasion of the Fête de Pâques, presented ten miniature velocipedes in aluminium bronze to his friends. The majority of the juvenile velocipedes are merely small varieties of those used by the seniors. There is, however, an adaptation of the "cantering propeller" affixed to a tricycle, which combines the pleasure of a rocking-horse with actual progression. Such are a few of the many forms which velocipedes have assumed during the past fifteen months.

Progress of the Velocipede.

La Belle France was the cradle of the velocipede. All that we know of its history points to France as its birthplace, and we are convinced now that that its resuscitation is due to the *petits crevés* and *cocottes* of Paris.

What a change from the cumbersome machine of M. Blanchard to the light and airy bicycle of the modern Parisian! But the change in popular opinion is even greater. It is true that caricaturists still make them the butt of their wit-pointed pencils; prince and peasant, noble and bourgeois,—all vie with each other in their admiration of the new vehicle. A vivid account of the scene presented by the riders appears in the *London Society* for November. We are told that 123 miles have been accomplished within the twenty-four hours, and that fifty miles in five hours have been repeatedly accomplished. Those who witnessed the feats of the French velocipedists at the Crystal Palace at Easter will believe all the stories of the dashing rides along parapets, and the marvellous races that have taken place. The riders frequently wear jockey caps and coloured jackets to distinguish them. One of the most frequent trials of skill is who shall go slowest, and who can ride best without any steering apparatus. At these races the prize is often a silver cup or a sum of money. The average length of the course is 1,800 mètres, which is nearly equivalent to a mile and a furlong. This distance has been done in four minutes and twenty-five seconds, although a portion of it was over a stone-paved road, by a bicycle. A tricycle took two minutes longer to perform the same distance. A racing speed of a mile in five minutes, for a distance of two or three miles, is very excellent riding.

A variety of suggestions have been thrown out with respect to their use. The *Salut de Lyon* states that rural postmen are mounted on them. Telegraph messengers are recommended to use them. Even country doctors and parsons are recommended to try the new iron horse which requires no corn. Artists, electors, and sportsmen are reported as using them. No wonder, then, that when the velocipede

was introduced into America, the Yankees exclaimed that "walking was on its last legs." They seized with avidity the new idea, though, until the fall of 1868, they do not appear to have excited much popular attention. The *Scientific American* notices their existence in the records of new patents earlier in the year, but gives no description of the new vehicle until later. The other American journals just notice the novelty, and then exclaim that pedestrianism has had its day, and must bow before the conquering run of the newer light. Its motion was described as graceful. It was a thing of life, moving with a smooth grace, alike exhilarating and beautiful to behold. They were introduced into the theatres, as in Paris; and the designer in *Harper's Weekly* represented the new year, 1869, as coming into the world seated on one of the new contrivances. The American public were treated to anecdotes of races between velocipedes and the street cars, in which the former were victorious, unless they met with a "foul," as in the famous race on Indiana Avenue, at Chicago. Races took place in Cincinnati, where the prize was a silver cup, worth 100 dollars, for the fastest, and another of equal value to the slowest rider. Mr. Dana, of the *New York Sun*, himself an experienced velocipedist, even advocated a project to build an elevated railway from Harlem to the Battery—from one end of New York to the other—for the use of riders of velocipedes only. By this means it was estimated that it would be possible to go from one end of Manhattan Island to the other, barring stoppages and accidents, in an hour. The proposed roadway was to be thirty feet wide, on an iron framework, and the flooring of hard pine. This idea seems to have infected an English inventor, if we may judge from a recent application for a patent.

On the 28th of November, 1868, a public race took place in New York, when the tall French pattern was very generally condemned, and the pattern now known as the American (fig. 5) preferred. It was at first known as the Pickering velocipede, and the driving wheel never exceeded three feet in diameter. The most popular pattern was one with the driving-wheel 33 inches high. The frame was made of hydraulic iron tubing, as more simple, lighter, stronger, and cheaper than any other material. They were made by gauge, so that if any portion met with an accident or wore out, it could be instantly replaced. Of the other three patterns, the Monod, which was the French pattern (fig. 3), received a large share of support; and those made by the Brothers Hanlon (fig. 6) and Messrs. Wood were looked upon with favour. At the beginning of the year the demand was so great that there was the greatest difficulty in procuring velocipedes of any pattern.

The manufacturers were overwhelmed with orders. The riding-schools, and the rooms opened by the manufacturers, were found too limited for the accommodation of those anxious to learn the new mode of locomotion. Art galleries were converted into velocipede training institutions; and it was no wonder that the supply fell a month into arrear of the demand.

At the beginning of January it was estimated that there were in New York and its immediate vicinity alone no less than 5,000 persons who either knew how to ride the velocipede or were learning, and it was estimated that at least half that number would be mounted during the summer. The side streets were thronged with them; but the city authorities forbade the use of the parks to the "carriage of the people." The great difficulty, present and to come, is to find places to ride in.

It was not to be expected that the American carriage manufacturers would permit so profitable a branch of manufacture to slip through their fingers, and it was not surprising that they soon began to devote a large portion of their establishments to the manufacture of the popular vehicle. It was understood that any manufacturer was at liberty to make the two-wheeled velocipede in any way he deemed most profitable, no one being aware of the fact that the machine had been duly patented, and the exclusive right secured, by a little Yankee foresight and ingenuity.

As far back as 1866 the *Scientific American* recorded a patent for the two-wheeled velocipede, with treadles and guiding-arms, known as Lallement's patent; but no one appeared to take notice of the fact, for bicycles were then a thing of the future—a French toy, which no one thought of. When, however, it was obvious that a "big thing" was to be done in velocipedes, Mr. Calvin Witty, of No. 638, Broadway, New York, went quietly to ascertain how the manufacture could be controlled; and he speedily found out the holders of the patent which covered the principle of the bicycle, and bought the exclusive right of manufacturing and using treadles and guiding-arms in America. The surprise and indignation of the various manufacturers can be easily judged, when they received a polite intimation from Mr. Witty that they were infringing his patent, and requesting a settlement for the past infringements. They pooh-poohed the claims, laughed at the notices, held meetings; but they found that the law was on Mr. Witty's side, and they had to purchase from him a license to manufacture. That gentleman has doubtless hit upon a mine of wealth to reward his shrewdness in forestalling the coming time, unless the opposing claim of Stephen W. Smith, also of New York, is substantiated, for he claims the invention altogether. He states that he invented and perfected the bicycle in New York, and

afterwards introduced it into France himself by patent. This claim is again disputed by Mr. P. W. Mackenzie, whose "Cantering Propeller" was patented in 1862, and whose specification embraces all the principles of Lallement's patent (fig. 1, p. 374). In the mean time the demand for velocipedes goes on, and is yet unsatisfied.

In England we are supposed to be a sensible people, neither affecting the excitement of the French or the sensationalism of the Americans; yet in the matter of velocipedes we have indulged in some strange vagaries. We at least have proposed velocipede railways. We have the "one-wheeler;" and we, too, have had races. On Wednesday, the 14th of April, 1869, Mr. C. A. Booth, the champion of skating, performed the journey from London to Brighton, on a bicycle, 52 miles, in $7\frac{1}{2}$ hours. Previously this had only been done in $9\frac{1}{2}$ hours. In Liverpool the gymnasiums are crowded nightly by expectant riders. Manchester has caught the fever. Birmingham has the symptoms. London is talking over the new excitement. The watering-places are thankful for the new sensation; and embryo riders exclaim—

I shall have no horse to feed,
Though I ride on a velocipede.

Ere I say farewell, let me caution velocipedists—past, present, and prospective—against expecting too much from any description of velocipede. They do not give power, they only utilize it. There must be an expenditure of power to produce speed. One is inclined to agree with the temperate remarks of Mr. Lander, C.E., of Liverpool, rather than with the extravagant enthusiasm of American or French riders. As a means of healthful exercise it is worthy of attention. Certainly not more than forty miles in a day of eight hours can be done with ease: Mr. Lander thinks only thirty. If this is correct, it does not beat walking, though velocipedists affirm that double the distance can be done with ease. Much will and must depend on the skill of the rider, the state of the roads, and the country to be travelled.

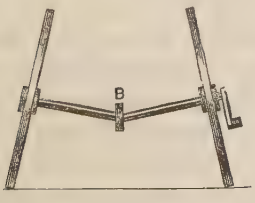


Fig. 30.

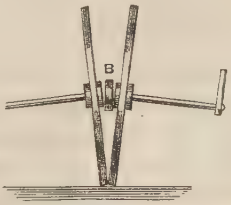


Fig. 31.

The Elyria Velocipede.

Stephen Scudamore the Younger;

OR,

THE FIFTEEN-YEAR-OLDS.

A STORY OF BOYS' ADVENTURES AT HOME, ON BOARD A PASSENGER SHIP, AND ON THE AUSTRALIAN GOLD-FIELDS.

By ARTHUR LOCKER.

PART VII.

The Mexican's Search for Titicaca.—Discovery of his Foot-tracks.—The Grains of Corn.—The Encampment.—Evidently the Scene of a Tragedy.—The Entrance of the Black Forest.—Its Alleged Dangers.—Prawle's Spirited Appeal.—We plunge into the Bush.—We make Acquaintance with some Birds.—Our Astonishment on hearing the Settlers' Clocks striking for the First Time.—Brackish Water.—A Solitary Stroll by Moonlight.—The Frog's Chorus.—A Young Female mistakes me for her Sweetheart.—We come on a Party of Diggers.—Their Extraordinary Behaviour towards Señor Robinson.—Tiger's Grave.—The Funeral Oration.—Arrival of a Messenger.—Great News.—To Horse and Away!—The Señor offers to catch Dick Potter's Horse.—Señor Gonzales Robinson hurls his Lasso, and, for once in his life, does not catch a Horse.—Mr. Potter's Astonishment.—A Transfer of Property.—The Señor becomes Bloodthirsty.—Lively Jemmy's Pluckiness.—Potter protests his Innocence, and, wonderful to tell, points the way to his own Dungeon.—Arrival at Carambong Creek.—The Police Barracks.—The Three Troopers.—Señor Robinson's ceremonious Address.—Astonishment of the Police.—Potter's Explanation.—Señor Robinson's wounded Feelings.—Satisfaction demanded.

THE sun had risen high in the heavens, we had eaten our frugal breakfast, and we had begun to think that we should never see Señor Gonzales Robinson or Topsy again—to say nothing of Titicaca—when our gallant commander came riding into camp on the back of the former, looking rather weary and disconsolate. "I will never touch brandy again," were the first words he uttered. He then narrated his adventures.

Having a very quick ear, he had hoped to recapture Titicaca by following the sound of his footsteps, and for more than half an hour had kept on his track, though unable to come up with him. The sound of the runaway's hoofs had then become fainter and fainter, and had at length passed altogether out of hearing. The Señor then endeavoured to find his way back to our camping-ground, but he had ridden off in such hot haste, and had taken such a circuitous route that he had paid no attention to any landmarks as he galloped along. He was accordingly obliged to rest under a tree until the daylight dawned, and not the least hardship that he had to encounter while in this position was that he had no matches in his pocket, and consequently was unable to strike a light, and solace himself with a pipe of tobacco. As soon as daylight appeared he was able to form some notion of the direction which he had taken, and was about to return to camp, when unfortunately, perhaps, for his peace of mind, he came across the impressions of Titicaca's feet. There was no possibility of mistaking them, for not only are the greater number of Australian horses provided with shoes, while ours, as I have already stated, were unshod, but there was a peculiar curve in the shape of one of Titicaca's hoofs which was at once recognized by the practised eye of the Mexican *caballero*. For two miles or more he painfully followed this track. In the soft ground of the hollows it was clearly and sharply defined, on the hard ground of the uplands it was more faintly marked, but was still discernible to the vision of an experienced forest-ranger. But at length the route taken by our runaway steed led the Señor across the broad line of march taken by the innumerable pilgrims proceeding to and from the diggings of Bendigo and Mount Alexander. It soon became impossible to follow it; it was lost among the treadings of the thousand feet of men, bullocks, and horses, to say nothing of the perpetual wheel-tracks with which the country was scarred. The Señor's keen eye had, however, observed something which made him think it worth while to retrace his steps, and follow Titicaca's hoof-marks in the reverse direction, back to the spot where he had first perceived them. He had noticed, but without paying much attention at the time to the fact, that for the first mile or so, Titicaca's footsteps had meandered about in a zigzag circuitous fashion, while latterly their course had been almost in a straight line. What did this mean? A more rigorous examination of the ground seemed to solve the mystery. He observed that, allowing for the comparative hardness or softness of the ground at any particular point, the footsteps were more deeply and distinctly imprinted where they pursued a direct course than where they wandered about at random.

From these two facts the Señor drew an important conclusion. He judged that during the earlier part of his flight Titicaca had travelled at his own pace, and in whatever direction he pleased, but that during the latter part of his course he had had a rider on his back! The next point was to discover where that rider mounted him. It was not very difficult to find this out, when once the clue had been given. At a particular point Titicaca had evidently paused to crop a few mouthfuls of grass. Human footsteps were visible near this spot; Señor Robinson bent down and examined the ground closely. Presently he picked up several small objects, and looked at them, I have no doubt, with an eye that twinkled with satisfaction, now that the worst was known. These small objects were grains of oats, and it was evident that while Titicaca was peacefully attempting to brace the nerves which had been so discomposed by Señor Robinson's rash display of fireworks by partaking of breakfast, some person or persons had come forward, and had seduced him from his proper allegiance by offering him a breakfast of a far more toothsome character. Further search produced further evidence. Within a few hundred paces of the spot where the grains of corn had been picked up, Señor Robinson found the remains of a large fire which had evidently been extinguished by the heavy rain of the previous night. Near the fire a tent had been pitched; the ground covered by it was very dry, showing that it had been occupied probably for several successive days, while the appearance of the holes in which the tent-pegs had been fastened proved that the tent had been removed that very morning, since the great fall of rain. But the most singular discovery of all still remains to be mentioned. From the pocket of his Lincoln-green blouse or "jumper" Señor Robinson drew, with great solemnity, a piece of linen stained dark-red, and with a small circular hole in it.

"I found this," he said, "on the extinguished embers of the fire. It has not been wetted by the rain, or the edge of the red stain would not be so sharply marked. It has been thrown on the fire by some person who wished to burn it, and who thought the fire was still alight. Now do you know what it is?"

"Well," said Prawle, "it looks to me, Señor, uncommonly like the breast of a fine linen shirt."

"Right. And these stains are blood, and this hole is a bullet-hole. Some queer work has been done where that tent was pitched last night!"

"Oughtn't we to inform the police?" asked Jemmy Wallington.

"Bah! I have no love for the police," grunted the Señor. "Of what

use are they to us? If we went to them we should only waste our time, and receive no thanks. If they could help me to find Titicaca, I should feel obliged to them."

Soon after this we started, but did not perform a very good day's journey, for we had set out late in the day, and we had only three horses to accomplish the work of five; and one of these three—namely, Prawle's friend Gamboge—was of very little use. We met with no adventures worth speaking of for some time, and on the evening of the following day, after traversing the dreary plains of Keilor, we reached the borders of the Black Forest.

I don't feel sure whether it is called the Black Forest because it bears a fancied resemblance to the famous woodland region of that name in Germany, or whether it was so named on account of a celebrated bush-fire which desolated the country on a certain Thursday in February, 1851. I was unable to see any great difference between it and most other wooded districts of the colony. I know we were very glad to escape from those naked, treeless plains, where the sun blazes pitilessly upon you by day, and the wind at night cuts through you like a knife; where we used to pick up every scrap of wood we could find, even if it were no bigger than one's finger, for the sake of boiling our kettle; and where, when we made our midday halt, we used to request old Prawle, in the interests of humanity, because he was the tallest of the party, to stand upright and motionless like a pillar, in order that we might lie in his shadow. You may ask why we didn't lie in the shadow of our horses. The reason was that they all had an ugly trick of letting out with their hind legs if a gadfly disturbed them, and it was not exactly pleasant, while in the act of sipping a scalding pannikin of tea, to receive a thundering crack between your shoulders which sent you spinning head over heels.

If we had listened to all the advice we received from parties coming from the diggings, I am sure we should have turned back in despair.

"No good going up, mates," they used to say. "All the gold has been dug. Provisions are at famine prices, and in another month's time there won't be a drop of water to make your tea with, let alone 'washing up your dirt.'" To one piece of news, however, we thought it worth while to pay some attention. Everybody unanimously pronounced the Black Forest a dangerous region. More outrages and robberies were perpetrated there than on any other part of the road, and there were two or three roadside taverns, mentioned to us by name, which were declared to be the haunt of villains of the most desperate reputation. The only safe plan, people said, for traversing this district, was to go up in parties

forty or fifty strong. And this was what we actually beheld on arriving at the entrance of the forest. Several small parties of two or three persons were seated patiently waiting by the roadside, until a sufficient number had accumulated to render travelling safe. Prawle, who managed to extract some fun out of everything, declared that it reminded him of a visit to the Tower of London, where the beefeaters make sightseers wait in a row until a dozen or more persons are collected. Then, and not till then, they take them round to see the lions. But Prawle did more than laugh at these imaginary terrors, for such he declared them to be. He proposed an entirely different plan of operations in a neat and effective speech, which I here reproduce from memory :—

"Mates," he began, "mates, I once more repeat, for I scorn and loathe the appellation 'gentlemen' now that we have entered upon the wild and trackless bush—— Excuse the digression, mates, but how rum that yellow waggon yonder, marked Figgins's celebrated ginger beer, 264, Little Burke Street, Melbourne—how rum it looks in the midst of the wild and trackless bush! The refinements of civilization and the savagery of the wilderness are brought into the most singular juxta——" ("Question, question," cried Tom Harvey, who, having once witnessed a debate in the House of Commons, entertained very strict notions of Parliamentary decorum). "The honourable member for Huddersfield" (this was in allusion to Tom's native place) "charges me with not keeping to the question. Sir,—I mean Gentlemen of the Jury,—I beg your pardon, I mean Mates, I *will* keep to the question, and I fearlessly tell that honourable gentleman, at the same time humbly requesting him to leave a drop of tea in the pannikin for a thirsty orator, that I *have* kept to the question. Mates, I spoke just now of the wild and trackless bush; I used those epithets in a spirit of mockery and derision, for the simple reason that we have never yet set eyes on the real bush. We have been perpetually in the company of human beings. Our path is scored with footsteps. Hitherto, instead of communing with Nature, as I had fondly hoped to do, I have felt as if I was in Fleet-street with all the shops shut and the pavement in the possession of the gas-pipe menders. Mates," continued the honourable member for Liverpool, with increasing indignation, "I haven't set eyes on a wild animal since I landed in the colony, barring those beastly black and white magpies, which ain't magpies at all, but only carrion crows." ("Hear, hear," from Lively Jemmy.) "I quitted the shores of Albion with my imagination filled full of kangaroos, and emus, and duck-billed platypuses. I haven't seen one. I haven't even set eyes on a cockatoo.

The honourable member for Mexico has just whispered in my ear that he saw a green parrot that morning when he was hunting for Titicaca, but I suspect it was only a dickey-bird. Now it's plain to me that we shall never see anything worth looking at if we stick to the beaten track to which everybody else sticks. I beg, therefore, to submit a proposition to the sense of this honourable house. The regular road to the diggings can't be more than three or four miles wide. Outside of that commonplace region of dust, mudholes, burnt logs, liquor-shanties, refreshment tents, horses, bullocks, diggers, and priggers—if I may apply such a term to the bushranging fraternity—outside of that commonplace region, I repeat, Nature must still exist in full feather, disturbed only by the occasional crack of the stockman's whip, or by the pipe of the wandering shepherd. Mates, in plain English, let us cut the main road, let us plunge half a dozen or a dozen miles into the bush, and make our way to Bendigo in an independent fashion. With stout hearts, and Jemmy Wallington's pocket compass, we can accomplish anything."

Prawle's speech was lustily cheered, and loudly approved of by everybody except the only experienced forester of our party—namely, Señor Gonzales Robinson.

"We have already lost two horses," he said, gloomily.

"Exactly," answered Prawle boldly. "We lost those two horses by keeping to the ordinary vulgar track. Diverge from the ordinary vulgar track, and you will see that you will lose no more horses."

The Mexican shook his head, but we were four to one, we were all young and sanguine, so we overruled him, and, instead of at once entering the forest, we steered in a due westerly direction, and before many hours, as Prawle had rightly foretold, we had got beyond all traces of the eager crowd which was perpetually passing between the metropolis and the gold mines. After making, as far as we could judge, fully a dozen miles of westing, we once more turned our horses' heads north-north-west, and presently perceived, by the increasing size of the trees, and the gradual elevation of the ground, that we had entered upon the southern slope of the Great Dividing Range, which runs right across the colony of Victoria, and which is partially occupied by the so-called Black Forest.

Nothing can be more desolate, and at the same time more vulgar, in my opinion, than the aspect of a region which Man has only entered for purposes of destruction, and upon which he has not cared to bestow any cultivation or embellishment. Some of the small Australian towns in those days were hideously repulsive places. The trees which once lent some freshness and beauty to the spot had been ruthlessly cut down

either for firewood or for building purposes, and their blackened stumps and mangled limbs still disfigured the uncultivated soil; all the natural grass had been trodden into mud or powdered into dust by incessant traffic. Nobody attempted to grow vegetables, there was not a patch of flower garden to be seen, for everybody was absorbed in the thirst for gold. If the inhabitants were not themselves miners, they devoted their energies to supplying such things as miners wanted, and in those days flowers and even vegetables were reckoned useless luxuries. Remember, I am speaking of sixteen or seventeen years ago, since which time the colony of Victoria has made wonderful progress in all the arts of civilization.

Prawle had soon no reason to complain of the want of *ferœ naturæ*—that is to say, of living creatures in a state of nature. We could not expect to see quadrupeds during the daytime, for the Australian quadrupeds are nocturnal. But I think this is the case with wild animals all over the world, except, perhaps, with those that approach in kind to our domestic creatures, such as wild goats, wild asses, and buffaloes. When the Psalmist speaks of the night as the time "wherein all the beasts of the forest do creep forth," he utters a truth applicable not only to Palestine, but also to America and Australia. But, though the four-footed beasts are all inveterate night prowlers, the birds are generally fond of daylight and sunlight, and we soon saw plenty of them. To begin with dickey-birds, as old Prawle rather contemptuously styled them. We soon made friends with the Australian robin, a lively little fellow, nearly as saucy and familiar as his British brother. He is not quite so big as the feathered mendicant with a scarlet waistcoat, who taps at our windows for bread-crumbs during snowy weather, but his plumage is much brighter. His head and body are of a glossy velvety black, while his vest is of a vivid crimson tint. I have noticed that these birds are very fond of perching on blackened logs, and while there, they look like coals of fire. In the bushes there were numbers of wrens hopping about, chirruping in the merriest way, and many of them were even more tiny than our wrens at home. Among these was a species of tomtit, which is, I think, known by the name of the superb warbler, though I have heard shepherds call it the diamond bird. The cock bird is very handsome, having a head and neck of the most brilliant blue, while his wings are of a rich brown colour. We soon saw plenty of parrots, mostly of the common green sort, flying in flocks of twenty or thirty at a time, and uttering a cry which sounds like "tussick-tussick." I fancy that this cry translated into English means "ware hawk," and that it is intended to warn their brethren that one of their

merciless hookbeaked enemies is somewhere in the neighbourhood. We also saw a curious bird about as big as a fieldfare, with an ash-coloured back and a whitish stomach. The peculiarity about this bird is that there are no feathers on its head, which is covered with a brown skin, drawn tight over the skull. On this account they are named "leather-heads." They are nearly as imitative as the American mocking birds, and I have heard the bullock-drivers declare that they pick up the names of the bullocks in their teams, and call out over their heads in the most impudent manner, "Sailor," "Captain," "Nobbler," and so on, just as an African grey parrot in London cries "Butcher," "Shop," and all sorts of other phrases from chance passers-by. Talking of bullock-drivers, there is a small insignificant-looking bird which gives these hard-working fellows a good deal of trouble. During the night, working bullocks are apt to stray from the camp in search of more appetising pasture. For this reason bells are generally hung round their necks, so that their master may be able to trace them by the tinkling sound. But often when he hears this tinkling sound in the distance, the driver finds that there is no bullock to be seen and that the sound has been caused by his diminutive enemy, the bell-bird. We now saw, for the first time, several white cockatoos; they usually fly in flocks of half a dozen or more, high over the trees, and utter the harshest and most discordant note of any bird in the Australian bush. Black cockatoos are more rare, and do not so often make their voices heard. Whenever they utter their cry, it is said to be a sure sign of approaching rain.

The first evening of our plunge into what Prawle was pleased to call the "wild and trackless bush" we met with a little surprise, which I cannot forbear mentioning, although almost every new-comer in Australia has been similarly astonished. The sun was just setting, and we were busy making preparations for our nightly halt. Tom Harvey, who was rather nervous, had declared that he had seen an enormous snake in the grass. It turned out to be only the blackened and twisted limb of a fallen tree, whereupon Prawle burst into a stentorian "Ha! ha! ha!" A moment later he felt inclined, as the saying is, to laugh on the wrong side of his mouth, for, to his intense astonishment and to our universal bewilderment, the laugh was repeated on all sides of us. "Ha! ha! ha! ho! ho! ho! he! he! he!" and this went on for five minutes or more, as if a chorus of fiends were mocking us. Jemmy Wallington tried to make us believe that it was an echo, but nobody ever heard an echo, even in Ireland, which went on for such an unconscionable length of time. Tom Harvey, who was as pale as a sheet,

declared that it proceeded from a tribe of black fellows, and that we might shortly expect to be transfixed with their poisoned spears; but Señor Robinson, who, though a stranger to the Australian bush, was accustomed to the phenomena of wild countries, presently detected the cause of our trepidation.

"See!" he exclaimed, pointing up into a tall gum-tree, with something approaching to a smile upon his grim face. "See, yonder is your echo—yonder are your black fellows."

We looked, and saw, perched upon the topmost boughs, two great birds, nearly as big as ravens, with strange comical-looking heads and long beaks. As we looked, they opened their beaks, and once more the weird, unnatural laughter burst forth, which was answered by similar convulsions of merriment from half a dozen trees in the neighbourhood.

"What a donkey I am!" cried Jemmy Wallington. "Now that I see the birds, I know what they are, for I heard all about them down in Melbourne. They are a kind of gigantic kingfisher; the bushmen call them 'settlers' clocks,' because they always set up this wonderful noise at sunrise and sunset, but their common name is the laughing jackass."

"Oh! nonsense!" cried Prawle gravely, and bursting, for the first time since I had known him, into poetry—

> "That bird a jackass? The notion's absurd;
> He's laughing at us, like a sensible bird.

"Well," he continued, subsiding into his native prose, "I'm beginning to believe that there are some live creatures in the country besides bullocks, and sheep, and blowflies. But I'm not satisfied yet; I want to see a kangaroo, an emu, and a duck-billed platypus. Platterpurses, the ungrammatical portion of the community call them, don't they, Jemmy?"

"Yes, just as they call the tarantula spider—a horrid beast with a poisonous pair of fangs—a triantelope. Well, Prawle, I don't think you'll see many kangaroos about here. I expect they've all been hunted away by the squatters and their dogs. As for emus, we must go a good way up the country to see them, on to the great plains near the river Murray, I'm told; and as for platterpurses, why they live in the water, and, barring the Yarra-Yarra, we haven't sighted a piece of water as big as an English duck-pond."

The water at the spot where we camped that evening was slightly brackish, so that our tea tasted as if some mischievous person had popped a tablespoonful of salt into the billy; in fact, we all accused

Prawle of doing so; but he stoutly denied the impeachment, and we presently found that the fault lay in the source from which we filled the kettle. About nine o'clock, just when we were thinking of rolling ourselves up in our blankets for the night, and creeping under the shelter of our tent, which a diligent use of the sail-needle had restored to a serviceable condition, I proposed to go and search for some sweeter water, so that we might enjoy a comfortable pot of tea in the morning.

"Who will come with me?" I said. "It's a lovely moonlight night."

Everybody made some excuse. The Señor was squatted close in front of the fire—he had a true negro's love of warmth—puffing away at his pipe, and all the others began yawning, and professed to be very tired.

"All right, I'll go by myself," says I; and I took up the billy.

"Don't lose your way, old boy; and mind you taste the water before you fetch it," cried Jemmy.

"If a bushranger attempts to stop you, Stephen," sang out that mischievous old Prawle, "tell him that you shall tell his mother, and if that doesn't do, say you shall give him in charge to the police. Good-bye."

Away I went, and wandered nearly a quarter of a mile, taking care to note the direction in which I was travelling. It was the first time since I landed in Australia that I had been entirely alone on a bright moonlight night, and the sensation was most exhilarating. Moonlight lends a charm to every object; even the ugliest and vulgarest buildings become picturesque under its magical influence; but the Australian bush looks especially lovely at such a time. Under the brilliant sunshine, the European misses the rich green foliage of his native country, and feels inclined to scorn the scanty brownish-coloured clothing of the trees; but on a moonlight night all is concealed under a coating like that of frosted silver. Moreover I was traversing a particularly pretty tract of country, all hill and dale, and dotted over with noble forest-trees, so that I could scarcely avoid fancying that I was in some lordly park, and that presently I should see the chimneys and the glittering lights of an Elizabethan mansion peeping through the trees. It is needless to say that I saw no such mansion, but I presently discovered that of which I was in quest. At the bottom of a gently-sloping valley I saw a clear pool of water. I descended to it, tasted it, and found it perfectly sweet. But before I dip my billy into the water, I must pause to tell you of some of the sounds which I heard around me, for at night there is no lack of sounds in the Australian forest. First and foremost came the frogs, of which there appeared to be plenty in and around this water-

hole. It is very curious to observe the manner in which these creatures begin their nightly entertainment. I have often watched them when camping out near a swamp or lagoon. Till about dusk they are usually quite silent; then somebody, who is, I suppose, the leader of the orchestra, says, solemnly, "Karack!" Somebody else, equally solemnly, replies, "Kakarack," and then the whole band of performers burst into song, as if they were executing a chorus at Exeter Hall. "Brekekekex co-ax, co-ax" this is the burden of their song, as old Aristophanes told us more than 2,000 years ago. Then again comes a pause, and a sort of conversation ensues. Perhaps the *patres conscripti* are discussing the affairs of the Frog-nation, settling when the next battle against the bandicoots and the kangaroo-rats shall take place; then once more bursts out the chorus "Brekekekex co-ax, co-ax;" and so on, *da capo*, throughout the night. Another familiar nocturnal sound is produced by the shrill screaming of the opossums, especially those of the ring-tailed kind, as they chase one another among the branches of the trees. But I shall have more to say afterwards about opossums; so, for the present, will pass them by. Then I heard the monotonous cry of the Australian owl, hooting from a neighbouring thicket. He is commonly called the "more-pork," because the note which he utters resembles those words. I have heard somebody argue that this bird ought to be happy, and yet that he is never contented.

"We poor diggers," they said, "get nothing to eat day after day, but mutton, mutton, mutton; while this lucky bird feeds on pig's flesh. He could not cry for '*more* pork,' unless he had ALREADY had SOME pork." But I heard another sound that was stranger than any of these. It was just as if somebody had brought a carpet into the bush, had hung it between two trees, and had then set to work diligently to bang the dust out of it. What could it be? I could not tell; so I stooped down to fill my billy with water, and remained for two or three minutes motionless, trying to catch sight of some of those talkative frogs which were chattering all around me. Suddenly I perceived a tall shadow thrown upon the water. Who could it be? A bushranger? Nonsense. It's that mischievous old Prawle, who has sneaked after me from the camp, and is now going to play me some trick. So I turned my head round, saying, "Now then, Prawle, none of your larks."

I can hardly tell you which was the most astonished, I or the figure that stood behind me. For it was not Prawle, nor any of my mates, nor, indeed, a human being at all, but a gigantic kangaroo, who was standing so close to me that I could have touched her. She had such a gentle, soft-looking face that I made up my mind she was a lady. I

"A gigantic kangaroo was standing close to me."

Page 560.

saw her, however, only for a moment, for directly she perceived that I was not her husband, or her sweetheart, or her cousin, but one of those cruel, white-skinned, tailless creatures who encourage ferocious dogs to tear the flesh of her gentle kindred, she uttered a cry of terror, banged her tail on the ground with a tremendous flop, and then leapt away in a series of such prodigious strides that she was over the hill-side, and out of sight, before I could say Señor Gonzales Robinson. I now began to understand the carpet-beating sound. It was caused by the kangaroos striking their tails upon the ground as a signal to each other. I could not help feeling pleased that I had seen this remarkable sight, and that old Prawle, being too lazy to come out, had missed it. But, indeed, if Prawle had come out with me, we should probably have both missed it, for we should have been sure to have got chatting together, and then that lovely kangaroo, for whom to this day I entertain a tender regard, would not have done me the compliment to mistake me for one of her relations. I afterwards consulted an experienced colonist about this kangaroo, and when he heard that it was nearly six feet high, he pronounced it to be a "boomer," or "old man," one of the largest existing species. Kangaroos, if caught young, are easily tamed, and become very affectionate. I remember one day going into a shepherd's hut to beg for a drink of water. The shepherd chanced to be a married man and his wife offered to give me something better than water; namely, a drink of milk. She went across the yard to fetch it from an out-house, and, to my surprise, three great kangaroos instantly leapt out and followed her. She told me they insisted upon going wherever she went. But, as is well known, animals attach themselves especially to some persons. I knew a man who had a small farm in an Australian village, and used to eke out his income by going about the country buying sheepskins. He declared that he never showed any particular kindness to his domestic animals, and yet, when he started to go out, his wife told me that he would often be followed, for a quarter of a mile or more, by a pig, a cat, a goat, and a hen; the fun of the thing being, that he was often quite unconscious of the motley cavalcade which was following his footsteps, and would, if he saw them, drive them angrily away.

Of course, when I got back to our tent, with my billy full of water in my hand, I related my adventure. Nobody seemed inclined to believe it. Tom Harvey rudely pronounced it to be a "whacker," and old Prawle rather offended me by holding up his hands in mock astonishment, and saying, as the little girls in the streets do, "Oh, you story!" However, in the morning, before breakfast, I insisted on his going with

me to the water-hole, and I asked Señor Robinson to join us. I triumphantly pointed out the prints of the kangaroo's footsteps alongside of my own in the soft mud of the bank; and though, as the worthy Señor had never seen a kangaroo, he could not say to what animal these tracks belonged, he materially assisted my cause by declaring that they were the foot-tracks of a creature bearing some resemblance to an immense hare. So much for my little adventure, which was presently succeeded by an incident of far deeper interest, which drove all thoughts of kangaroos out of our heads.

The sun had nearly attained its full height, the heat was growing oppressive, and our cattle were beginning to show signs of weariness. Señor Gonzales Robinson gave notice that at the next convenient resting-place we would make a halt. We were now traversing an undulating region, timbered with fine trees, but still of such an open character that we could easily have driven a gig over it without meeting any serious obstacle. Just as we had surmounted the brow of a hill, if I may give the name of hill to such gradual ascents as these were, Señor Robinson paused, and uttered a low sound like the "hugh" of an Indian scout. Pointing his finger into the valley before us, an unexpected sight met our eyes. We saw a party of men, five in number; two of them were apparently engaged in digging a hole, the other three were standing round it. Several horses were grazing near at hand, and the smoke of a small fire was curling into the air.

"I know what they're doing," said Lively Jemmy, confidently. "They're prospecting—searching for a gold-field. Let us try our luck too."

"They won't care to have us too near them," observed Tom Harvey, rather nervously. "My advice is to give them a wide berth."

"What do you say, Señor?" asked Prawle.

"They are all armed," replied the Mexican, shading his eyes with his hand as he spoke, and then mechanically handling his own weapons. "Five men to four boys and one man. The odds are not fair."

"I say, Señor," cried Prawle, good-humouredly, "you mustn't insult us by calling us boys. I don't mind it, because I'm pretty big, but it hurts the feelings of a little chap like this," he added, laying his hand on my shoulder.

"Why should we take into our heads that they must be enemies?" I asked. "They are most likely harmless diggers like ourselves."

"Young gentleman," replied the Mexican, gravely, "in a country like this I take every man for an enemy until I prove him to be a friend."

"Oh, dear me!" said Prawle; "that's a very uncomfortable view of human nature. As long as people are civil to me I'm civil to them. Come, let us go boldly up to them, and ask them what their prospects are like."

"Hear, hear!" cried Jemmy; and I said "Hear, hear!" also.

"What do you say, Tom?" asked Jemmy.

"Oh, I'm ready to do anything you like," replied Tom Harvey, valorously; but, though his words were brave, his face wore an anxious expression.

"And you, Señor?" asked Prawle.

"It looks ill to show fear," he replied. "We have as much right in the bush as they have. We will go up to them and ask them the news."

While we had been holding this council it was evident that the five strangers, having perceived us, had been engaged in a similar palaver. The two who had been digging had climbed out of the pit, and the whole five were now standing in a circle. By the time we had approached within speaking distance they broke up their consultation, and the two diggers recommenced their work. I had hitherto only heard vague descriptions of the manner in which gold-digging was conducted, and was therefore especially anxious to witness the process. The pit which the men were excavating appeared about six feet long and about two feet wide: near it lay something which looked like a heap of clothing. Conversation now began between us.

"Good morning, mates!" sang out Señor Robinson, assuming a tone of careless unconcern.

"Morning!" answered cheerfully a tall black-bearded man in a scarlet blouse.

"Any signs of the yellow metal?" asked Prawle, endeavouring to be jocose.

"I can't say at present," replied the other; "we haven't gone deep enough."

"Are gold-diggers' shafts always made this shape?" demanded Jemmy, as he peered into the hole.

"It makes me shudder," muttered Tom Harvey. "It reminds me of a churchyard."

At this moment I heard two of the men talking in low tones together. One of them said, in reply to the other, "What does it signify? They're a parcel of boys and new chums."

Directly after this the man in the scarlet shirt, who appeared to be the leader of the party, uttered a low and peculiar whistle. Instantly

two of the others drew alongside of Señor Robinson, each pointing a pistol at his head, and peremptorily bade him hold up his hands, on pain of instant death.

"Mind!" shouted the leader, as he perceived the Señor's hand wandering towards his weapons, "I see you're a new chum, and don't understand the ways of this country. This is what we call 'bailing up.' Hold up your hands, and not a hair of your head shall be touched. Refuse to hold them up, and these boys here shall ascertain from practical observation whether their commander-in-chief has got any brains or not. Do you hear me, sir?" he added fiercely. "Hold up your hands at once."

"I yield," replied the Mexican haughtily, "because I can't help myself."

"No, of course ye can't, ye fool," replied one of his captors brutally. "But we can help ourselves." And as he spoke he drew Señor Robinson's cherished pistols from his belt.

"Terrible old-fashioned tools, captain," he observed, as he handed them to his leader. "Made in the year one, I should fancy, in the days of Jerry Abershaw, or some of them Hounslow Heath coves."

"Yes, they're not good for much," answered the captain as he quietly stuck them into his own belt. "And now, young gentlemen," he added, turning to us, with an air of easy politeness, "I suppose you've none of these dangerous weapons in your possession?"

"I've nothing of the kind, captain, upon my honour," said Prawle.

"Nor I," repeated each of us in succession.

"Shall we search 'em, or take their word for it, captain?" asked a broad-shouldered, red-bearded fellow, with a patch over one of his eyes.

The captain examined each of our faces attentively for several seconds.

"Take their word for it," he replied. "And, now then, my lads," he said, addressing us, and assuming a tone of frank good humour, "I want you to answer me a few questions. How long have you been in the colony? what diggings are you bound for? and how came you so far off the main line of road?"

Señor Robinson still remained rather sulky, but the rest of us, judging that it was better, as we were unable to help ourselves, to reply with a good grace, answered readily all the questions we were asked.

"Good," said the captain. "You boys have set an excellent example to this sullen little nigger here, whom I have a great mind to punish for his obstinacy."

Señor Robinson's brown cheeks reddened with rage on hearing these

opprobrious words. He ground his teeth and stamped his foot, but he dared not lower his hands, for the muzzles of the merciless revolvers were still held close to his temples.

"You have told me your story openly, and without reserve," continued the captain, "and now I will speak without reserve in return. Weren't you surprised at being stopped upon your journey in this forcible manner?" he continued, turning to Prawle, and indicating the captive, Gonzales Robinson.

"Not at all," answered Prawle. "We were told to expect this sort of thing."

"What sort of thing?"

"Why, we heard that in the Black Forest there were plenty of Diana's foresters, gentlemen of the shade, minions of the moon, as Mr. Shakespeare calls them."

"You don't mean to say," cried the captain, with an air of astonishment, "that you took us for bushrangers?"

"I did, indeed," said Prawle quite seriously.

All the troop burst into a laugh at these words, "Well, that is a good 'un." "Did ever you hear the like?" and so forth.

"No, no, young man," said the captain, gravely, "we are persons of good character, like yourselves."

"I'm delighted to hear it, sir," replied the imperturbable Prawle.

"And now I will tell you why I have detained you. We wished you to be present at a very solemn ceremony. We are not digging for gold. That young man yonder," indicating Tom Harvey, "was right when he spoke about a churchyard. We are digging a grave in which to bury one of our mates, who died this morning. Uncover the face of the corpse, Dick."

As he spoke these words, one of the party stepped forward to the heap of clothes, which I had observed lying on the ground, and disclosed the fixed and rigid features of a dead body, decently dressed in a blue serge shirt and white trousers.

I had never before been brought face to face with Death, and I felt terribly startled. Besides, the scene was enough to strike any one with awe. The solemn silent forest—for during the heat of the day all the birds' voices are hushed—the group of armed men, with their picturesque dresses and lawless faces, and the stiff stark carcase of that which had once been a man, made a deep impression on me. I could perceive that all my youthful companions were similarly affected, even Prawle's face grew a shade less ruddy than usual. As for the Señor, he remained stern and immovable; but he darted a swift glance

of intelligence at us, as though he could say something important if he chose to do so.

"Captain, the grave is ready," said one of the diggers, as he leant on his pickaxe.

"Very well. Bear a hand to lower our poor friend Tiger into it."

"He looks quite a strong young fellow," said Prawle to me, in a half-whisper; "I wonder what he died of."

"He died," answered the captain, in a deep, stern voice, "of an overdose of lead. You are aware that lead, taken in excess, is a deadly poison?"

"Any burial service, captain?" asked one of the men who was guarding Señor Robinson.

"No," he answered gravely. "I don't meddle with such matters. But, by your leave, mates, I'll say a few words about the deceased before we shovel the earth on to his breast:—We all knew the deceased as Tiger, mates, not because of his ferocious disposition, for he was an amiable creature, but because when he first joined our company he wore a yellow waistcoat with black stripes. Our friend Tiger, mates, was always to the fore, a courageous and industrious workman. He had a wonderful nose for scenting out the smell of gold. He lost his life in the path of duty. He felt sure that there was gold in a certain pocket—a deposit of gold," he continued, turning to us, in an explanatory tone, "is technically called a pocket—he felt sure that there was gold, I say, in a certain pocket; and in endeavouring to ascertain the fact he swallowed the poisonous dose of lead which brought him to his present horizontal position. Tiger, old boy," said the captain, addressing the unconscious corpse, "good-bye to you."

All the others said "good-bye" also, and the two spademen were on the point of shovelling the earth into the grave, when the sound of horse's hoofs was heard, and a horseman, wearing a bright blue blouse, with a green veil round his hat, and a pair of jack-boots on his legs, galloped in hot haste into the camp.

"I say, captain," he cried, "I've great news." He then stopped short, and eyed us suspiciously. "Who are these fellows?" he asked.

"Square coves,"* was the reply. "But you needn't mind them. Tell us the news."

"There's a thousand ounces coming down the road. Nine in party. They've all got bulldogs,† and mean to use 'em. Still, the job may be done by careful scheming."

Hereupon an earnest whispered conversation ensued.

* *I.e.*, honest men. † Pistols.

"Are you all agreeable, mates?" demanded the captain, addressing his companions.

"Of course we are, we're always agreeable," they replied.

"Then," said the messenger, "there's not a moment to be lost, or they'll reach the plains before we can come up with them."

"Mates," cried the captain, "you hear what our friend the Dandy says. You must catch your horses at once, and be off. Never mind that cursed little nigger any longer."

Señor Gonzales' eyes flashed fire at this repeated insult.

"I suppose we may turn out his pockets," said one of his guards.

"Turn out anything you please, only look sharp."

Accordingly, to Señor Gonzales Robinson's intense disgust and mortification, his pockets were searched, and three one-pound notes, besides some loose silver and a snuff-box, were discovered and appropriated by his captors.

"Now for the young 'uns," pursued the scoundrels, and one of them unceremoniously seized Tom Harvey by the collar.

"No," shouted the captain in a commanding voice; "I won't allow it. Let the boys alone. Be content with the prize in prospect, you greedy rascals, and be off to saddle your horses. Young gentlemen," he said, turning to us with an air of the utmost urbanity, "will you do me a favour? I shouldn't like to think that my friend Tiger's eyes had been picked out by the hawks, or that his flesh had been nibbled by the native cats; so will you have the kindness to fill up his grave as soon as we are gone? We are essentially business-men, and business summons us away. This gentleman," indicating the messenger, "has just brought us news of the discovery of a new gold-field. If we find it a profitable place we will send you our address." And with this extremely polite farewell oration the captain rode off to hurry on the preparations of his men.

They were evidently accustomed to this sort of hasty summons, for before five minutes had elapsed they were all in their saddles, with the exception of one unfortunate fellow, who was unable to catch his horse. I could not help being amused as I watched him. He had put some oats in a tin dish, and went sidling up to the animal, who stretched out his neck willingly enough to take the oats, but as soon as his would-be rider endeavoured to throw the halter over his neck, he threw up his head scornfully, kicked out his heels, and galloped coquettishly away. The colour of the horse—he was a bright chestnut—and the oats which were offered him as a bribe put me in mind of our lost steed Titicaca.

"He looks rather like Titicaca," said I, doubtfully.

"It is Titicaca," whispered the Mexican in reply, in a voice of concentrated spite. He had evidently recognized his lost steed as soon as he caught sight of him.

"Now then," shouted the captain, "we're all waiting for that lubberly fellow Dick Potter. Can't you manage to catch your horse, Dick?"

"No, that I can't," answered honest Dick, as he wiped his forehead, which was streaming with perspiration.

"Shall I try to catch him for you, sir," said Señor Gonzales Robinson, addressing the captain in a tone of singular humility; "I am a Mexican, and accustomed to horses. Yonder hangs my lasso," he said, pointing to Topsy's packsaddle.

"Ay, do, my friend," answered the captain, "for we're losing most valuable time. And hark ye, you two petty pilferers, Nat the Weaver and Barney Callaghan, hand over the contents of the Señor's pockets to Dick Potter. Dick, as soon as the Señor catches your horse for you, give him back his money, d'ye hear?"

The two rascals who had been guarding Señor Robinson delivered over their spoil to their comrade with extreme unwillingness.

"Mind," said the captain, addressing Dick, "I'll have no cheating. Pay the man his money as soon as he gives you your horse. Honour bright!"

"Honour bright," replied Dick.

"And now, then, we'll be off. You must ride hard after us, Dick, and catch us up. Away!"

At this signal the captain, attended by his messenger and his three followers, cantered swiftly away, and were soon hidden from view by the undulating ground.

I felt sure there was mischief lurking in the Mexican's eye, but I had no idea what he intended to do. We were all unarmed, while a brace of revolvers gleamed in Dick Potter's belt.

"Now, Mr. Potter," said the Mexican with great politeness, "if you will hold out the dish with the oats, I will secure your horse for you."

"No," answered Potter suspiciously, as he handled his pistols; "let one of your boys take the oats. I'll look on."

"Good, that will do just as well," said Señor Robinson carelessly. "Scudamore, you hold the oats."

And he advanced cautiously, lasso in hand.

Señor Gonzales Robinson stood with his lasso poised in his hand, preparing to fling it over Titicaca's head, while I advanced cautiously towards the wary animal, and tried to inveigle him by holding the tin dish of oats under his nose. My three comrades were engaged in

watching our other horses, lest Titicaca's gambols should perchance induce them to make a bolt, while Mr. Richard Potter, who was supposed to be the owner of the horse we were trying to catch, stood aloof, surveying the operation with a keen eye, and with a hand ready in case of need to grasp one of his revolvers.

Now, before I go on to tell you what happened, I must say a few words regarding the strange scenes of which I had been a witness during the last hour. I had had no opportunity of comparing notes with my companions, but I came to the conclusion that these self-styled diggers were a set of scoundrels. The captain of the band was as polite as if he had been accustomed to Belgravian drawing-rooms—I afterwards heard that he had—but nevertheless I judged him to be a lawless fellow, and that in reality he had been summoned away for the purpose of committing some robbery of an unusually important character. These men had appropriated Titicaca without scruple, but horsestealing was such a common offence at that period in Australia that I did not think much worse of them for what they had done. But Titicaca's loss reminded me of the strange discovery which Señor Gonzales Robinson had made in the extinguished embers of that bush-fire. Was there any connection between the blood-stained fragment of linen which he found there, and the death of the man called Tiger, to whose funeral oration we had just been listening? Undoubtedly there was a very close connection.

Some readers may think that we youngsters showed little courage in allowing our commanding officer to be plundered while we stood tamely by. But what could we have done? We were entirely without weapons, while the enemy were armed to the teeth. If we had raised a finger to attempt a rescue, Señor Robinson's brains would infallibly have been blown out at the first onset.

Please now to observe the various positions occupied by the four personages who played the chief part in the little drama which I am about to describe. Titicaca's fears had subsided, he had allowed me to come up close to him, he had begun to nibble the oats, he had suffered me to stroke his neck, and in another minute I could have seized him by the mane. Señor Gonzales Robinson, with his lasso coiled ready for a throw, placed himself at a distance of about five-and-twenty paces, facing Titicaca, and with his back to Mr. Potter, who stood at about the same distance further behind. Suddenly Señor Gonzales raised his arm above his head, and at the same moment revolved swiftly on his heel. He cast his lasso, but it did not fall upon the neck of our runaway steed. For once in his life the unerring marksman had strangely

missed his aim, the lasso flew in the opposite direction, and fell over the astonished shoulders of Mr. Richard Potter.

"Look out!" cried Prawle, "he is going to fire!"

But Mr. Potter was not quick enough. Before he could disengage his revolver from the belt, the Mexican, by a vigorous jerk, had thrown him upon the ground, and then pulled the slip-knot with such merciless vigour that the captive's face began to grow black, and his eyes seemed ready to start out of his head.

"You will kill him, Señor!" I exclaimed.

"Not yet," answered the Mexican, with a revengeful gleam in his eyes. "Come here, two of you, and help me to bind his arms and legs. Meantime, keep a bright look-out, you others, lest the rest of the gang should return and surprise us."

As soon as Mr. Potter's limbs were made fast, the Señor, with a chuckle of satisfaction, transferred his prisoner's revolvers to his own belt, besides emptying his pockets, and regaining possession of his three one-pound notes. His snuff-box and loose silver had been carried away by Nat the Weaver and Barney Callaghan, who had taken care not to interpret their commanding officer's orders too literally.

Titicaca had darted away with a convulsive spring on seeing the dreaded lasso flying through the air, but as soon as he perceived that it had not come near him, but had, instead, enclosed a two-legged animal, he paused, and then, neighing in a friendly manner as a token of recognition to his former friends, Topsy, Lucy, and Gamboge, advanced towards them. The result was that, before he was able to escape, Prawle had seized him by the mane, flung himself on his back, and knotted his long legs under his belly in lieu of girth. Having then galloped him up and down for a few minutes, until he had cured his fidgettiness, Prawle dismounted carefully, and proceeded to place Mr. Potter's saddle on Titicaca's back, and Mr. Potter's bridle over his head.

"Upon my word, Titty," observed Prawle, when he had accomplished this operation, "you really look like a gentleman's horse now. If I were only a little more elegantly dressed, I should have no objection to displaying myself on your back in Hyde Park."

Jemmy Wallington was a good-hearted fellow, and could not bear to see even a bushranger suffering. His hand had been the first to slacken the suffocating pressure of the slip-knot, and then he opened his stores and poured a liberal dose of brandy down our captive's throat. The alcohol revived Mr. Potter's spirits, and his complexion regained its original sunburnt tint. He opened his mouth and began to speak; and,

though he was bound hand and foot, and at the mercy of the revengeful little Mexican, he spoke with perfect calmness and selfpossession.

"I want to know what's the meaning of all this tomfoolery?" he demanded, addressing himself to Señor Robinson, and garnishing his speech with a plentiful sprinkling of forcible adjectives. "What have I done, that you should first hang me like a dog, and then truss me like a fowl?"

"You called me a cursed nigger," answered Señor Robinson bitterly. "You stole my horse. Prepare for death. It is good to rid the world of such villains as you. Yonder is a grave ready dug. There is room for your carcase on top of your friend Tiger. I give you the space of time while I count a thousand." And with these alarming words the Mexican retired a few paces from his prisoner, and began muttering to himself, "One, two, three, four, &c.," in his native language.

To this day I do not feel sure whether the savage little man was speaking in grim jest or bitter earnest, but I know that we all uttered an exclamation of horror at his bloodthirsty language.

Jemmy Wallington did more. We were quite surprised to see that slightly-built, girlish-looking young fellow, whom nobody thought to be gifted with too much courage—to see him walk up to the Mexican, and looking him straight in the face, speak thus :—

"Señor, in all matters of discipline I promised to obey you, and I will obey you cheerfully. But we are Englishmen, and we don't like even to hear people talk of putting other people to death in cold blood. If you mean what you say, we won't allow it; if you don't mean what you say, where is the use of uttering empty threats?"

"Bravo! Jemmy," cried every one of us spontaneously.

There was a tigerish gleam in the Mexican's eye; he was armed, and we were defenceless; nevertheless moral force prevailed, and he answered, as if rather ashamed of himself, "I just wanted to frighten the fellow."

"I don't know what I've done to hurt you, Mr. Senior, expostulated the captive. "It wasn't I that called you a cursed nigger, it was Captain Maconochie. I didn't prig your money, it was Nat and Barney."

"You stole my horse," urged Señor Gonzales.

"You mean that chestnut there that the long-legged young fellow is riding? I don't know that he is your horse, Mr. Senior. I know that he strayed into our camp, and that we meant to take care of him till we could find his rightful owner."

"I am the rightful owner," cried Señor Gonzales.

"Where's your receipt from the last seller?"

Señor Gonzales searched his pockets, but could not find it.

"Your scoundrelly friends have stolen it," he cried passionately.

"I know nothing of that," answered Mr. Potter, coolly. "And now what are you going to do with me?"

"It would serve you right to tie you to one of these trees, and leave you there to die of hunger and thirst," exclaimed the Mexican.

"I say, I say, Señor," cried Prawle, "don't make a fool of yourself. Stow that kind of talk. Don't brag of doing what you don't dare to do."

"Young gentleman," shouted the little foreigner, furious with passion, "you are going too far. Do not venture to provoke me." He significantly touched one of his pistols.

"Who says that I'm going too far?" cried Prawle.

"None of us," we all exclaimed. "Bravo! Prawle. Prawle for ever!"

"Come, Señor," said Prawle, "don't let's have a row, especially over a worthless vagabond like this prisoner of ours. We've been excellent friends hitherto. Shake hands. Let us fill up Tiger's grave, and be off as soon as possible."

Señor Robinson was evidently intimidated by the bold front we had shown. I make great allowance for him, I believe he meant well, but he did not understand an Englishman's love of justice and fair play. He extended his brawny brown fist, held it out to Prawle, and then to each of us in succession. Our good fellowship was completely re-established.

"And now, gentlemen, that you've settled your own differences, what do you mean to do with me?" asked the prisoner.

"We shall hand you over to the police, as soon as we can find a police-barracks," answered Prawle.

"The nearest police-barracks," observed Mr. Potter in a tone of the utmost unconcern, as if he had been a stranger to whom we had applied for information—"the nearest police-barracks are fifteen miles from here, at Carambong Creek, over yonder," nodding with his head, as his hands were tied. "As you are bound for Bendigo, it won't be much out of your road to take me there, and it'll be a convenience to me if you will do so."

"I say, Mr. Potter," asked Prawle drily, "do you see any green in my eye?"

"Yes, Mr. Prawle, I see a good deal," answered the prisoner, calmly. At this reply we all burst out laughing.

"Do you suppose we believe in the existence of your wonderful police-barracks at Carambong Creek?" asked Prawle.

"Whether you believe in them or not don't signify a straw," replied Mr. Potter. "The barracks are there. If you don't find the barracks where I say they are, I give you leave to tie me up, and let me have three dozen on the bare back."

"We could accommodate you in that respect, Mr. Potter, without asking your permission," answered Prawle.

"Now, gentlemen," said the prisoner solemnly, "I am going to make a last appeal. You had much better let me go. You mistake me altogether. I am an innocent man."

We could not help laughing at his cool impudence.

"What is more, I am a secret agent of the police."

"Ha! ha! ha!" we all shouted in reply.

"I swear by all that is sacred that I was on the point of securing that gang of bushrangers when you interfered with me."

"Bah!" cried the Mexican, in intense disgust, as he bent over his prisoner, and looked hard in his face. "Bah! you are a liar and a perjurer, as well as a thief. If the police pronounce you innocent, I also swear by all that is sacred that I will swallow this lasso!"

Before filling up Tiger's grave, Señor Gonzales stooped down and uncovered the dead man's breast. As he had anticipated, he found there a small wound, evidently made by a bullet.

"Are you a murderer as well as a perjurer?" he said, addressing the prisoner. "How came this man by his death?"

"Didn't you hear Captain Maconochie say how?" answered Mr. Potter, rather gruffly. "The Tiger swallowed more lead than was good for his constitution."

"You mean that he was shot?" said Tom Harvey.

"Yes, he was shot."

"By his own mates?" asked Prawle.

"Do you suppose they'd murder him, and then make a speech over his grave? Not exactly. Tiger was shot, as the captain told you, in the execution of his duty. It was his duty, as one of the firm, to ask any likely parties whom he happened to meet on the road how much gold they had about them. A storekeeper whom he addressed in this manner thought the question impertinent, and answered him out of the barrel of his revolver. Tiger was of a nervous constitution, he dropped with astonishment at such a rude reply; some other members of the firm picked him up, and nursed him for three days at that place where you say you lost your chestnut horse. They then brought him on here, and here, as you perceive, he croaked."*

* *I.e.*, died.

"Do you mean to say that you are not a partner in Captain Maconochie's firm?" asked Prawle.

"I am a professed partner—not a real one. I am an honest man in the employ of the police, and I warn you that you had better let me go."

"We will let you go—into a prison, nowhere else," answered Señor Robinson.

By the time this conversation was concluded, the grave had been filled up, and we started on our journey towards the Carambong Creek, for Mr. Potter was so persistent in assuring us that there was a police station there that we felt bound to believe him. As we did not care to carry him on horseback, we unloosed the cords which bound his legs, still keeping his arms partially pinioned, and marched him between us. Señor Gonzales was less inclined to trust Mr. Potter than we were; he persisted in believing that his prisoner was endeavouring to lead him into a trap, and he warned him that any attempt at a rescue on the part of his mates would be followed by his instant death. It did, indeed, seem highly ludicrous that we should be indebted to our prisoner for directions as to the locality of his intended dungeon, but we were totally ignorant of the country, and, being away from the ordinary track of travellers, could find nobody to whom we might apply for information.

We made a forced march, pushed our pack-horses forward, and reached the Carambong Creek soon after sunset. We had now crossed the Black Forest in a diagonal direction, and had reached the northern slope of the Dividing Range, where every drop of rain that falls flows inland, and ultimately, if not sucked up by the scorching sun, swells the volume of water in the Great Murray River. Carambong, which is marked in the official survey maps as the township of Belvidere, was a place of uninviting aspect. It consisted apparently of two public-houses, two butchers' shops, a blacksmith's, a baker's, a general store, and the police barracks, which latter appeared extensive enough for a place fifty times as big. But it seemed the Carambong was the central police *rendezvous* for a large rural district. So far Mr. Richard Potter had evidently not humbugged us. By the time we got into the village—if such a pretty name as village can be applied to a miserable hole like Belvidere—it was getting dark, for we had spent half an hour or more in fording the waters of the Carambong, which were swelled by the late heavy rains. Consequently the few inhabitants who were stirring abroad paid no attention to us, for it was too dark to perceive Mr. Potter's pinioned arms, and that was the only feature about our cavalcade which was likely to excite any curiosity.

Señor Gonzales Robinson, bidding us guard the prisoner safely, marched in advance of us into the courtyard of the barracks, swelling with importance at the news which he had to communicate. Three troopers were lounging in the yard, reclining on a prostrate log of wood and smoking their evening pipes.

"Gentlemen," said the Mexican, pulling off his broad-leaved hat, and making a ceremonious Spanish bow—a performance which, I am sorry to say, Prawle instantly imitated, to our intense amusement, behind his back—"gentlemen, I have secured an important prisoner—a member of Captain Maconochie's gang."

"Maconochie's gang!" exclaimed a handsome young Irishman, as he lazily blew out a wreath of fragrant smoke. "Bedad! that's good news if it's true. A bigger set of spalpeens niver set foot in Port Phillip than Maconochie's gang."

Señor Robinson looked round on us with an eye of triumph, as much as to say, "Didn't I tell you so?"

"What's his name?" asked another trooper.

"Here he is to answer for himself," replied Señor Robinson, shoving his captive, as he spoke, into the presence of the police.

"Why it's Potter!" exclaimed the police in accents of unfeigned astonishment.

"Potter," said one of them sternly, "I hope you haven't been playing your old game, pretending to work for us, and then doing business on your own account. How came you in such a fix as this?"

"So help me Billy, gentlemen," answered Mr. Potter earnestly, "I'm as true as steel. It's all this meddling fellow's doings," pointing to Señor Robinson. He then told the story of his capture.

"Hang it, man," cried the Irish constable, "why didn't you tell 'em you were working for us?"

"So I did, Mr. Delany; I swore the solidest oaths I could think of that I was an agent of the police, and they wouldn't believe me."

"What a pity it is that Potter looks such a rogue!" observed another constable.

"I can't help that, gentlemen. I am what Heaven has made me."

"Don't lay the blame of that red nose and those watery eyes on Heaven, Mr. Potter," remarked the chief constable. "And now, my man," he said, knitting his brows, and addressing himself to Señor Gonzales Robinson, "you've placed us in an awkward position through your officiousness. For private reasons Mr. Potter is giving up his connection with the highway business, and we had made a bargain with him that he should ride over and give us information as to where the

firm, with which he has been lately connected, would be at a certain hour this afternoon. We should have bagged the whole lot, we should have taken Maconochie, the cleverest bushranger in Victoria, who has two hundred pounds reward set upon his head, and now we have lost the chance all through you—you abominable little meddling nigger."

Señor Gonzales reddened with rage, and drew a pistol. "Sir," he replied, in a voice tremulous with anger and disappointment, "I am a Mexican, and a gentleman. I demand instant satisfaction, or——"

(*To be continued.*)

KEY TO PUZZLES ON PAGES 510—512.

1. Earthquake.
2. Monsoon, Typhoon.

3. Cryptograph.

Avaunt all specious pliancy of mind
In men of low degree, all smooth pretence.
I better like a blunt indifference,
And self-respecting slowness, disinclined
To win me at first sight; and be there joined
Patience and temperance with this high reserve.

4. Hireling.
5. London, Thames.
6. Bookcase.
7. George Frederick Handel.
8. William Vincent Wallace.
9. Carl Maria Von Weber.
10. Nicolo Antonio Zingarelli.
11. Galicia.
12. Mexico.
13. British Columbia.
14. California.
15. Florida.
16. Madagascar.
17. Illyria.
18. Cochin China.
19. Mate.
20. Yard, Ache, Rome, Deed.
21. Iman, Mere, Aria, Neap.
22. Rein, Else, Isis, Nest.
23. Pale ale.
24. Copernicus, Hipparchus.
25. Holbein, Teniers.
26. Wallet.
27. Robert Southey, Thomas Cranmer.
28. Neal.
29. Logan.
30. Neele.
31. Horne.
32. Keats.
33. Step, Tire, Erse, Peer.

STEPHEN SCUDAMORE THE YOUNGER;

OR,

The Fifteen-Year-Olds.

A STORY OF BOYS' ADVENTURES AT HOME, ON BOARD A PASSENGER SHIP, AND ON THE AUSTRALIAN GOLD-FIELDS.

By ARTHUR LOCKER.

PART VIII.

The Pistol-shot.—Death of a beloved namesake.—News of Maconochie's gang.—To horse and away!—The female blacksmith.—Prawle as an auctioneer.—Singular accident near the Wombat Inn.—Norah the kind-hearted servant-maid.—An old hand claims acquaintance.—Sleeping till sunset.—The duckbilled platypus.—Captain Spanswick's excitement.—Captain Spanswick lectures the Señor.—The Captain's magnanimity.—Prawle winks his eye.—A dissolution of partnership.—Appearance of the Bendigo diggings.—Iron Bark Gully.—Mr. Skilbeck and his dog Muzzler.—I behold a frightful apparition.—The art and mystery of gold-mining.—Sam Skilbeck's advice.—Sundry employments.—Jemmy Wallington's dampers.—Finding a nugget.—Prawle's tumble.—Anecdotes about flies.—Skilbeck's good-natured proposal.—I become assistant to a storekeeper.—Prawle converts himself into an advertising medium.—My experiences as Tom Prince's shopman.—Prawle's wonderful invention.—How to filter muddy water.—Guy Fawkes day on the Diggings.

"DO you dare to threaten us with your pistol?" exclaimed the Irish trooper. As he spoke, he fearlessly threw himself, though unarmed, on the enraged little foreigner and seized his wrist. The pistol exploded in the struggle, and the bullet, after passing within eighteen inches of Tom Harvey's heart, buried itself in the body of my unfortunate white mare. Poor Lucy, my dear sister's namesake, uttered a groan, staggered, fell, and after a few convulsive struggles, expired. Two minutes after-

wards our late commander was securely handcuffed, while Mr. Richard Potter was set at liberty.

"The tables are turned, eh?" observed the latter, with a malicious glance at the Mexican. "Now, gentlemen," he continued, addressing himself to the constables, "I don't want to take any man's character away, especially when he is down upon his luck; but I'm afraid, in point of villainy, there isn't a pin to choose between this little chap in the green jumper and Maconochie. I believe he has come over from Niggerland expressly to live by what he can pick up on the road."

"Nonsense!" cried Prawle. "I hope, gentlemen, you are not going to believe this fellow, who has gallows-bird written on his countenance, and a big R for rogue, I'll warrant, printed on his skin, if you look under his shirt."

The constables smiled at Prawle's remarks.

"I'll forgive what you've just said, Mr. Prawle," replied Potter, "because you saved my life from this bloodthirsty little darkey. But before you abuse me, listen to evidence. Do these revolvers belong to the Mexican?"

"No," said the chief constable; "they were supplied by us to you. Here is the Government brand upon them."

"The revolvers were taken in self-defence," I cried.

"Were my three one-pound notes taken in self-defence, young whipper-snapper?" demanded Mr. Potter. "You'll find them in the prisoner's pockets, Mr. Delany,—numbers 25142, forty-three, and forty-four."

"You're right,—here they are," said the Irishman, as he turned out Señor Gonzales' pockets.

"They are my notes," rejoined the Mexican; "I got them at the Melbourne Bank."

"Lastly, gentlemen," continued Mr. Potter, "he has stolen that chestnut horse which strolled into our camp the other day, and which I was taking care of till I could find the rightful owner."

"I bought that horse at the bazaar in Great Bourke Street," cried Señor Robinson.

"Allow me to say a word," interposed the chief constable. "You're a useful fellow, Potter, but your character isn't altogether stainless. As for this man, I know nothing against his honesty, but I know that just now he nearly blew out Sergeant Delany's brains. I shall impound both horse and money for further evidence."

He had scarcely finished speaking, when a mounted trooper galloped into the yard. His horse was covered with sweat and mud: he had

evidently ridden hard. He dismounted, and at once entered into an animated conversation with the other three constables. We heard such scraps of talk as the following :—

"You are sure it was them?"—"Sure, but I could do nothing alone against such a number."—"A thousand ounces! That will be worth recovering."—"Woolpack Inn, and travelling due east over Henderson's Run, eh?"—"Here, Potter, I want to say a word to you."

Presently afterwards we heard Potter say, "I believe, gentlemen, I can put you on their track."

"Very well; then you must mount the chestnut. This horse, my lads," he said, addressing us, "must be taken for the service of the Crown. If you can hereafter prove your title to it, it shall be returned to you. Release the foreigner from his handcuffs; we've no time to waste over such trifles. Get your horses and arms ready at once."

Within ten minutes from that time, the constables, who had been reinforced to the number of ten, rode away in the moonlight, leaving us in charge of some of their comrades, who, having been in the saddle all day, had retired to rest, but were now aroused by this unexpected summons.

"Well, it's an unlucky business," they observed when they had heard our story; "only two horses left out of five—one suffocated in a gully, one shot, and one carried off by our mates. New chums had better not bother themselves with horses."

These constables treated us very civilly. They gave us something to eat, they showed us a convenient camping-ground, and assisted us to drag away the white mare's carcase. With their help, we dug a pit, and tumbled poor Lucy in, so that her remains might not taint the fresh air of Belvidere. Next day we held a council of war, and as we had only two horses left, we determined to sell them and the bulk of our stores by public auction to the inhabitants of Belvidere. One misfortune following upon another seemed to have deprived Señor Robinson of all his energy, so the management of the sale was intrusted to Prawle.

"I wonder," remarked Jemmy Wallington, as we sat chatting that morning after breakfast, "whether the Señor means to exhibit the feat which he promised us."

"What feat?"

"The swallowing of his lasso. Our prisoner was certainly regarded by the police as an innocent man, and was set at liberty by them."

"You call that wretch an innocent man!" exclaimed the Mexican, who had come behind us unperceived. "Why, he is the worst of the whole gang. They are robbers, and murderers too, I doubt not, upon

occasion; but this Potter is a blacker villain than any of them, seeing that he will sell his comrades' blood for money. His innocence must be proved more clearly than it is proved at present, before I swallow my lasso. How I wish," added Señor Gonzales bitterly, "that, instead of listening to you soft-hearted young gentlemen, I had blown his brains out! I should have rid the colony of a scoundrel, and I should have saved our best horse. I fear we shall never see Titicaca again."

Belvidere was not on the main line of route to the diggings, and was rather a sleepy sort of place. It had arisen during the old primitive days of the colony, when gold-mining was unknown, and when flocks and herds constituted the sole wealth of the country. Besides, many of the male inhabitants had gone to the diggings, leaving their premises in charge of their wives and other female connections. Glancing into the blacksmith's shop, I saw a buxom lady presiding at the anvil. She wore her husband's apron, her arms were bared, showing a fine muscular development, and she was instructing a miserable little undersized pale-faced fellow in the art of making horseshoe nails.

When I related this anecdote to Prawle, he at once said that Mrs. Skilbeck must be a woman worth knowing, and that he would try and make her acquaintance. So he went with me to the forge, and, having patiently waited until she had finished the job which she had on hand, namely, the shoeing of a drayhorse, he introduced himself to her, and told the story of our various mishaps in such a straightforward, and yet in such a comical manner, that she laughed until she was ready to cry, yet could not help pitying us. Mrs. Skilbeck warmly approved of Prawle's proposal to sell our goods and chattels by public auction, and advised that the sale should take place about two in the afternoon, as by that time the inhabitants would have just finished their dinners, and would accordingly be in the most generous of tempers. She was very anxious that Prawle should enter her service as striker. "I took yon lad," she said, pointing to her assistant, "just out of charity. He had been bad with dysentery at Forest Creek, and hadn't a sixpence in his pocket; but he has never been used to hard work, and he hasn't the strength to wield a smith's hammer."

Prawle replied that he should be very glad to learn blacksmithing; "for," said he, "next to butchering and grog-selling, it seems the most profitable trade in the colony; but first, Mrs. Skilbeck, you must allow me to have my turn at the diggings. If I don't make my fortune there, I shall come and apply to you for a situation."

"Which diggings are you going to?"

"Bendigo."

PRAWLE AS AN AUCTIONEER.

Page 581.

"That's where Skilbeck is," observed his wife.

"Blacksmithing or digging?"

"Digging, the daft fellow, on Iron Bark Gully, and has never had a week's good luck since he went there. If he would set up a forge, and leave other folks to search for the gold, he might make his fortune. Come, Hoskins," she continued, addressing her striker, "look alive; I can't have book-reading during working hours; here comes Tom Snaith for that bullock-chain."

Poor little Hoskins had taken advantage of his mistress's talkativeness, and had pulled a ragged volume out of his pocket. I peeped over his shoulder. It was the "Lady of the Lake."

Half an hour after this, Prawle gravely mounted an empty sugar-barrel in front of Mrs. Skilbeck's door, and, tapping a frying-pan, as if he was trying to attract a swarm of bees—for we could not borrow a bell in all Belvidere—he addressed the public in the following words:—

"Oh yes! oh yes! oh yes! This is to give notice, that at two o'clock, sharp, this afternoon, a choice assortment of goods will be submitted to public competition on this spot; comprising a carefully selected stock of the finest groceries, and sundry other articles too numerous to mention. Be in time! be in time! be in time!"

This oration, which Prawle concluded with three solemn taps on the frying-pan, he repeated about twenty times in succession. He confessed that the last phrase, "Be in time," was not exactly orthodox auctioneering language; he had borrowed it from early recollections of fair time at his native Greenwich. You may wonder why he did not perambulate the streets of Belvidere, as a bellman should do, instead of staying in one place. My answer to this is, that there was only one street in Belvidere, and that anything said in a tolerably loud voice in front of Mrs. Skilbeck's forge could be heard all over the village.

At two o'clock quite an imposing assemblage, as Prawle styled it, had gathered together before the auctioneer's pulpit. Besides ourselves, I counted no less than twenty-three persons, and of these only nine were young children.

The first article offered for sale was a bag of sugar belonging to myself—the bag in fact which got so wet during the storm.

"Ladies and gentlemen," said old Prawle gravely, "I need not enlarge on the utility of sugar, nor need I dwell on the manner of its production. It is enough to say that if it doesn't sweeten our sorrows, as the ladies do, it certainly sweetens our tea." (Great applause from Mrs. Skilbeck and the other ladies present.) "Here is a prime sample, slightly caked by wet, but none the worse for that. I am told that

sugar of the most inferior quality is selling in the Bendigo at half a crown a pound."

"Yes, that's true enough," observed a drayman.

"Myself and my mates are sorry, as you may suppose, to lose the chance of a magnificent profit," continued Prawle; "but we have lost three of our horses, and have no means of transporting our merchandise. Who will make me a bid?"

"I'll give yer a shillin' a pound, young man," said the drayman, "for all the sugar you've got."

"Thank you, sir," says Prawle cheerfully. "Any advance on a shilling, ladies and gentlemen?"

The bag was ultimately knocked down to Mrs. Skilbeck for one-and-ninepence—a low price; but the bidders were few and languid.

I am not going all through the sale, which, though very interesting to us at the time, would be very stupid to read about; but I must observe that there was one article which created some enthusiasm,—that was the raspberry syrup. Prawle opened a bottle, and, having procured some water, handed the bottle round to his audience, that they might taste the delicious beverage. During the summer months, drinking-water is scarce in many parts of Australia, and of very indifferent flavour. People sometimes like a change from the eternal tea, especially for their children. So the raspberry syrup went off, as Prawle phrased it, "like smoke." Just as he was selling the last case, containing three dozen, a neighbouring squatter rode up, and secured the lot at five shillings a bottle. As it had only cost us eighteenpence, we realized a fine profit on this article; and we wished, as Prawle afterwards remarked, that we could turn our unfortunate horses into the same seductive liquid. Gamboge was in poor condition, and had a sore back. Three pounds was the utmost we could obtain for him. As for Topsy, Señor Robinson declared that nothing would induce him to part with her under ten pounds. For a long time nobody would offer more than eight pounds ten; then Prawle, descending from his pulpit, and apologizing to the company for abandoning the dignified behaviour of an auctioneer, cantered her up and down the street, thereby raising her price ten shillings; finally, a cockatoo farmer—that is to say, a small farmer—agreed to give ten pounds, provided some tea and tobacco were thrown into the bargain.

Prawle was really a capital auctioneer, for, though he made people laugh, he did not behave like a buffoon: there was plenty of sense in what he said. We afterwards drank his health in some colonial beer, very poor sickly stuff compared to the malt liquor of Great Britain—they understand brewing better nowadays in Victoria—and then we

totted up our accounts. In spite of Prawle's exertions, the pack-horse speculation had left a very heavy loss behind it. For the joint adventure between Prawle and myself, which had cost me nearly thirty pounds, I received back only eleven. Jemmy Wallington was a little more fortunate, as he had been the principal owner of the raspberry syrup; as for Tom Harvey, he had only a half-share in his goods, the rest having been provided by Captain Spanswick; while Señor Robinson, as I afterwards discovered, owned nothing at all, but was merely the captain's agent. So that I, the youngest of the party, was actually the severest sufferer. But I am not going to worry you about these losses of mine; and, after all, as Prawle observed, we had obtained a great deal of valuable experience. I had become sharper, more active, and more able to depend on myself; I had learnt more in a few days than I should have learnt in several years if I had stayed in Liverpool.

We were very sorry to part with Topsy; but one horse would have been of no use to us, and we could travel quicker on foot without her. We retained nothing but our blankets, and such provisions as were absolutely necessary. We found the tent, though it was only made of calico, rather a bother to lug along; but we arranged to carry it in couples for an hour each; and thus relieve one another. At night, of course, it was a great convenience; for, though the sun was oppressive during the day, the nights were very sharp, and showers of rain fell several times. As we had made up our minds, however bad the weather might be, that we would never pay for sleeping accommodation, I little thought that before I reached the diggings I was destined to pass a night in an ordinary bed, under a roof considerably more substantial than our flimsy calico. The adventure that befell me was on this wise:—

At a spot within twenty or five-and-twenty miles of the Bendigo Creek, where there is now a busy railway-junction and a flourishing little town, there stood in those days a solitary tavern called the Wombat Inn. We had been especially warned against this inn. It bore an evil reputation, and was said to be the accustomed haunt of gentry of the Maconochie and Potter stamp. Accordingly, having reached the neighbourhood at sunset, we carefully avoided the inn, and camped out on the slope of an adjoining hill near a permanent stream of water, which in England would have been called a brook, but which in arid Australia was dignified with the title of the King-Parrot River. It was certainly the most considerable specimen of flowing water which we had seen since we had quitted the banks of the Yarra-Yarra. So Prawle and Jemmy Wallington made up their minds that there must be fish in

it, and, as they had brought hooks and lines with them from Melbourne, they determined to enjoy an evening's fishing. Señor Robinson and I attended to the pitching of the tent; Tom Harvey, as usual, undertook the cooking. Now, I could not find a suitable spar to make a ridge-pole for our tent, because the travellers, who were constantly passing to and fro, had cut down all the straight small trees, which are generally taken for such a purpose. Accordingly, leaving my mates to light the fire and boil the kettle, I went alone over the ranges to search for a ridge-pole. I could not find a young tree, but, at last, I saw a branch growing horizontally from a moderate-sized tree. The tree had had a fire lighted at its foot; but I thought nothing of that, so many Australian trees having been partially burnt in this manner without seeming any the worse for it. I climbed the tree, and, seating myself on the branch, began to saw it off with my little hand-saw. I need hardly say that I was not so stupid as the man in Gillray's caricature, who sits on the sign-board, and saws off *between* himself and the wall. I took care to be on the *treeward* side of the amputation. The branch was a heavy one, laden with foliage. Just as I had sawn it through, a tremendous crash took place, heaven and earth seemed coming together, and I lost all consciousness. When I recovered my senses, I was unable to tell where I was: by degrees memory began to unroll a sort of moving panorama of my life at old Bagshot's academy, of Mrs. McGaffney's Liverpool boarding-house, of my voyage on board the *Ruth Hayward*, and my adventures before starting for the diggings.

While indulging in this strange reverie, I suddenly caught sight of my saw, and it then momentarily flashed upon me that I had come to get a tent-pole, and that my companions were awaiting me at the foot of the hill. I heard something drip—drip—on my collar, and putting up my hand to ascertain the cause, discovered that I was bleeding freely from the jaw and neck. I then descended slowly towards my mates, fancying that somebody had fired at me by accident or design. The Señor and Tom Harvey uttered an exclamation of astonishment on seeing me, for I was ghastly pale, and like a person walking in his sleep. They returned with me to the hill, and then they discovered that the fire which had been lighted at the foot of the tree had eaten out its heart; that it was a mere shell; and that the shock of the branch falling, added to my own weight, had brought down the whole concern. As the tree was twice or thrice as big round as a man's body, and as the fork where I was sitting was some twelve feet from the ground, it was almost a miracle that I escaped with merely two or three wounds in the neck and jaw (and a broken tooth or two), caused by the "stubs"

of the branches. As my jaw was beginning to grow very stiff, I was anxious to find out if any bones were broken. A doctor, who was travelling up the road, who had pitched a tent close beside us, and to whom we had just before lent a frying-pan, was extremely kind, examined my wounds carefully, pronounced that there were no bones broken, but strongly advised, as it was a damp, chilly night, that I should sleep under a roof and put on a poultice. If Prawle or Jemmy Wallington had returned, one of them would have insisted on going with me; but I did not care to ask Señor Robinson or Tom Harvey to accompany me, as neither of them offered to do so. Accordingly, I crawled over alone to the Wombat Inn, and found there a scene of drunken revelry, which made me, in my faint and weary condition, almost sick at heart. The landlord and his myrmidons were so busy selling grog that for some time I could get no one to attend to me; at length a slipshod Irish girl coming out of the kitchen took compassion on me, and told me that she would presently make me a poultice and show me a bed. It was quite early in the evening, for the sun had not long set.

While I was waiting at the bar, a fellow with a villainous countenance tried to claim acquaintance with me, professing to believe that I was a pal of his, and had received these hurts in some thievish affray.

"You were lagged young," he said. "Didn't you come to Hobart Town on board of the *Timbuctoo?*"

"No; I first landed at Melbourne."

"That be blowed. You're an old hand, young'un. I'll swear I've seen your face somewhere."

I could have said the same of him. But that the patch from the eye had disappeared, and the red beard had been shaved off, I should have recognized him as a member of Captain Maconochie's firm.

"Perhaps you saw me," I ventured to say, "when you were burying your mate Tiger."

"Ha! I thought we knew one another. Now then, what are you going to stand? My pockets are empty. Don't say a word about Tiger here, as you value your life," he added, in a ferocious whisper.

I don't know how I should have shaken this fellow off; but, luckily, Norah, my Irish sister of mercy, beckoned me to the kitchen, where she tied up my face, and then conducted me to a small bedroom, into which half a dozen beds were crammed. I believe that I fell asleep almost instantly, and slept for some time, although when I afterwards opened my eyes and saw a candle in the room, and a man preparing to get into bed, I felt as if I had only just got into bed myself. I watched his

movements with dreamy curiosity. At the last moment he lighted a pipe, and, leaving the candle unextinguished, got into bed, and covered his head, pipe and all, completely with the clothes. I believed at the time that either the house would be burnt or the man suffocated, yet felt so weary and apathetic that I did not care to raise a finger: however, no harm took place. I was awoke by the sun streaming into the window, and by the voice of the Irish girl saying, "Arn't ye going to get up? 'Tis six o'clock."

"Thank ye," I answered; "I shall lie a bit longer, I don't care to rise so early."

"But it is six o'clock at night," she rejoined.

I had slept all round the clock, for nearly twenty-four hours; and the prolonged quiet and repose did my wounded face a great deal of good. I found Jemmy and Prawle waiting for me down below. They had tried to get in the night before, but had been repulsed, they said, by a drunken man in the bar, who declared that I was his particular friend, that we had been transported together in the same ship to Van Diemen's Land, and that nothing should induce him to give up the key of my room to a couple of suspicious strangers. They did not recognize Redbeard as one of the Maconochie firm. They had come again the next morning, and, hearing that I was asleep, had begged Norah to let me lie as long as I pleased. They were delighted to see me looking so well after my severe tumble, and then produced with great mystery something which they had caught the night before, and which they said they were sure would please me. It was a duck-billed platypus! He had taken the hook, as Prawle said, just as kindly as if he had been a Christian fish, instead of a heathenish zoological jumble. His body was covered with fur like an otter; his tail resembled that of a beaver; his feet were partly like a waterfowl's and partly like a porcupine's; his head and beak were almost exactly like a duck's, only the beak was broader. These creatures are warm-blooded, and lay eggs. After we returned to the camp, Señor Robinson skinned the platypus, and I believe it now stands in a glass case in the hall of a certain house not a hundred miles from Huddersfield. For my sake, as my jaw was very painful, we spent the next day in complete rest, and then proceeded by easy journeys to Bendigo.

We soon found Captain Spanswick, who was seated, as usual, on his brown cob, with a fine-flavoured cigar in his mouth. He looked as neat as a new pin, as if he had just stepped out of a Pall Mall club-house, while we were shabby, dusty, and travel-stained.

"Well," said he, "I'm delighted to see you; and I've made first-rate

arrangements for the sale of our produce. Prices are higher than ever, and horses are in brisk demand."

We looked at one another rather foolishly for a minute or two; then the Señor broke silence. In a melancholy voice, and with downcast eyes, he said, "There are no horses, captain, and there is no produce!"

You should have seen Captain Spanswick's face when he heard our adventures!

For some little time Captain Spanswick appeared very angry, and we were surprised to perceive how meekly Señor Robinson endured his rebukes. This man, who had shown such ungovernable ferocity towards Potter, now stood with his head down, like a sheepish schoolboy who has been caught with a pocketful of stolen apples. But there was nothing vulgar about Captain Spanswick's lecture; he made no allusions to the Señor's diminutive stature, nor did he taunt him because the colour of his skin was nut-brown; he gravely pointed out to him the various errors of which he had been guilty.

"I cannot blame these young men," he said; "they are excused by their youth and inexperience; but I felt that if I could safely entrust a team of packhorses to any man in the colony, I could entrust them to you. Now let us successively consider the manner in which the three horses have been lost. First, with regard to the black horse Coalscuttle, which was jammed in the gully. Was it prudent, Señor, to allow a lad like Harvey to act as pioneer in an unknown country?"

"No, captain; it was imprudent," replied the Señor.

"As you confess your fault, I will say no more about Coalscuttle. Next for Titicaca."

Señor Robinson uttered a groan. "Say nothing about Titicaca," he muttered. "I alone was in the wrong there. I drank that cursed brandy, and it took away my senses. But we may still recover Titicaca."

"I shall certainly try do so. I shall at once apply to the police. And Topsy? Did not she lose her life by a shot from your revolver?"

"In that case," replied the Señor, "I am scarcely to blame. Those villains of constables, instead of thanking me for the service I had rendered them, loaded me with the grossest abuse; I raised my revolver, not to shoot, but to demand satisfaction; one of the troopers rushed upon me like a wild beast, and, in the struggle, the weapon exploded."

"Supposing the ball had killed one of these young men?"

"I should have been sorry. It would have been an unlucky accident," replied the Señor calmly.

"It would, indeed. You would have been found guilty of man-

slaughter, and sentenced to labour for years on the roads, like a felon. Well, well, Señor, I will say no more. We must make the best of a bad job. Gold-digging will, I dare say, repay us for our other losses. To-morrow I will show you the 'claims' which I have marked out. Viewed by the light of geological experience, they promise admirably."

In a conversation which I afterwards had with Prawle, I remarked that I thought Captain Spanswick had behaved in a very magnanimous manner.

"I don't altogether agree with you," answered Prawle. "It's all very fine for the captain to sit there on his horse lecturing us as if he was an alderman at Guildhall, and we were a parcel of refractory paupers; but who did all the hard work? Why, poor old Gonzales and we. While the captain has been ambling up the Bendigo road like a gentleman, stopping at squatters' houses, revelling in kangaroo soup and all the delicacies of the colony, we have been toiling and sweating like galley-slaves!"

"But Captain Spanswick owned a large share in the horses and stores, Prawle?"

"Yes; that I don't deny. But isn't it rather strange that the Señor had no share in them?"

"I suppose he has no money."

"Yes, he has—three hundred pounds of his own, which he brought from Mexico. He has been telling me about it this morning. He says that Captain Spanswick has a brother, a merchant at Vera Cruz, for whom the Señor entertains a high respect. He made the acquaintance of this Spanswick in Melbourne, in a chance way. The captain would not allow him to invest any of his money in the packhorse speculation; he said, 'No; my brother might blame me if it was lost. I will invest your three hundred pounds for you in a safe bank; it will increase at a high rate of interest while you are at the diggings.' 'The captain,' says poor old Gonzales quite enthusiastically, 'is the cleverest and the best man I ever knew.' 'Clever,' thinks I to myself, 'he certainly is; for he manages to make other people do all the hard work; but as for his goodness, that's another affair.'"

"What a suspicious old fellow you are, Prawle," said I.

"My wits," returned my companion, "have been sharpened by the atmosphere of large towns. I matriculated at Greenwich, passed my little-go at Stratford-le-Bow, and took my degree at Liverpool. Behold me now an M.A.—Master of the Arts of cunning men."

I shall not bother my readers with a long detailed account of the Bendigo diggings, as they have been described over and over again.

But I must say that we were extremely disappointed in our first view of the mining region. Before we left Melbourne we heard that there were fifty thousand miners on the Bendigo. We naturally expected a scene of tremendous bustle and activity, and fancied that we should see the fifty thousand gold-hunters all at work close alongside of each other, like ants in an ants' nest. It never entered into our heads that this great number of persons was scattered over an extent of country fully as big as the area of London. Now London contains three millions of inhabitants. Supposing fifty-nine out of every sixty Londoners were suddenly to disappear, very few people would be visible in the streets, and yet the remainder would equal the population of Bendigo at the time when we arrived there. At the central point of the diggings, where the Government Commissioner's Camp, the Post Office, and the Police Barracks were situated, the number of large canvas and wooden stores, with their gay flags, gave some animation to the scene. As Prawle observed, it reminded him of Greenwich Fair, with all the gingerbread, the scratchbacks, the wild-beast shows, and the fun left out. Between the various gullies and valleys in which the gold was chiefly found, and which ran parallel with each other, like the streets of a city, there were long solitary stretches of forest upland—"ranges" is the proper Australian expression; and even in the gullies themselves the tents and the working parties were widely scattered. The bottoms of these gullies resembled roughly-executed railway cuttings, the earth having been turned in every direction in search of the precious metal. In fact, when we looked around us, we felt in some despair; for although only a few months had elapsed since the discovery of the Bendigo gold-field, all the work seemed to have been done, and all the gold carried away. Captain Spanswick had marked out two "claims,"—one on Golden Gully, the other on Peg Leg Gully. Now, if the holder of a claim did no work there during a period of twenty-four hours, anybody else could appropriate the "claim," or "jump" it, as the diggers used to say. But Captain Spanswick had taken care to "shepherd" his claims—that is to say, he had visited each of them at least once during the day, and while there had performed some "tiddly-winking" work—that is, he had shifted a few spadesful of earth, or used the pickaxe for ten minutes or so, just for the purpose of establishing his title to the property. And now the important question how we were to work our claims had to be decided. It was useless for six persons to work in one hole. Three were enough for each shaft, according to the simple mining fashions of that period. The captain therefore proposed that we should divide ourselves into two parties of three each.

"Now, shall we choose sides, or how?" he asked.

"Prawle and I would like to stick together," I answered, quickly.

"And I should like to join you," said Jemmy Wallington.

"Just the very thing, captain, isn't it?" observed Prawle. "We three will race you three, and see who will be the first to dig out a big nugget. By a big nugget, I mean one the size of a York ham. I shan't be satisfied with anything smaller."

I don't think the captain exactly liked this arrangement. He wanted to secure Prawle for himself, and I think he would have preferred Jemmy or me to the Señor, who, though an excellent horseman, knew nothing of pick and shovel work, and was at least forty years of age. As for Tom Harvey, we reckoned him rather a mollycoddle. He was a capital cook, but he did not care for any work where there was a risk of hurting himself.

"I had hoped you would have joined my division, Mr. Prawle," said the captain. "Remember I have been on the diggings before, and my geological knowledge will be of no small value."

"But surely, captain," cried Prawle, good-humouredly, "you won't cut us altogether. You'll come and show us how to set to work, won't you?"

"Oh, yes! I shall be most happy to afford you any information. Indeed, I am bound to do so, as the two claims will have a joint interest in each other's success."

On hearing these words, Prawle winked solemnly twice in succession, first with his right eye at me, and then with his left eye at Jemmy Wallington.

"The two claims are two miles apart, are they not, captain?" he said.

"Yes, about two miles."

"We shan't care to travel two miles of rough road oftener than we can help after a hard day's work," observed Prawle. "Captain Spanswick, I don't expect we shall see much of one another, and therefore I recommend that those fellows who work together should share profits together, and with no one else."

"Hear, hear!" cried Jemmy.

"Why that is as much as to propose a dissolution of partnership!" exclaimed Captain Spanswick.

"Yes, it does come to pretty much the same thing," replied Prawle, coolly.

"I think, Mr. Prawle, I deserve a little more consideration at your hands. You seem to forget all the trouble I have undergone in bringing you up here."

At these words, Prawle clapped his hands to his sides, and burst into a merry, chuckling laugh.

"Ha! ha! ha!" he cried. "Oh, ye gods and little fishes! I can stand a good deal, but I can't help grinning over this piece of fun. Why, what trouble have you had, Captain Spanswick, to bring us three up to Bendigo? We paid for everything, horses and stores, out of our own pockets—I should speak more correctly if I said that Scudamore paid for me,—and our own legs carried us up the road. For the life of me, I can't make out what service you have rendered us. The only thing for which we are indebted to you is a heavy loss."

"Caused, Mr. Prawle, by your own mismanagement," answered the captain.

"Just now you laid all the blame on your own agent, Captain Spanswick," returned Prawle: "you mustn't blow hot one minute and cool another. Mind, it isn't I that complain of the Señor. I think Señor Robinson" ("barring a tendency to put prisoners to death in cold blood," he whispered aside to me) "is a downright good fellow. Three cheers for the Señor, and may his shadow never be less!" concluded Prawle, mischievously pointing to the solar reflection of the corpulent little Mexican, which looked more like the outline of a barrel on skids than the shadow of a human being.

"Three cheers for the Señor!" cried Jemmy and I, waving our hats. The captain and Tom Harvey could not refuse to join in the salutation.

Señor Gonzales Robinson acknowledged the compliment with the profoundest gravity—for he had not watched Prawle's "aside,"—and bowed till his nose nearly touched the ground, and the baser portion of his body formed a horizontal line with the back of his head.

"Mr. Prawle," he said, "my thanks. Gentlemen all, I tried to do well. Forgive me for doing badly."

"And now, Captain Spanswick," said Prawle, "don't let us part ill friends."

"My dear fellow," returned the captain, suddenly becoming enthusiastic, "I have no such intention. I have the highest respect for you and your mates. As a proof of my respect, allow me to make over to you the claim which I had marked out on Peg Leg Gully."

Once more Prawle winked solemnly at us.

"Thank you, Captain Spanswick," he answered, "I think we had better mark out a claim for ourselves."

"I don't ask you a sixpence for it," said the captain, "and my geological researches are worth something. I could sell the claim this very day for fifty pounds, cash down."

"Sell it then, my dear Captain Spanswick," cried Prawle, "sell it by all means. Jemmy and Stephen and I are very proud fellows. We mean to work on our own account, and if we make a hit, we want to have all the credit of it."

"*Timeo Danaos et dona ferentes;* that is what you were thinking of, weren't you, Prawle, when Captain Spanswick made his offer?" said I, as soon as we three were alone together.

"No, I wasn't, because I don't understand Greek."

"Greek! It's Latin, it's out of the Æneid."

"Oh, is it? What does it mean?"

"It refers to the bringing of the wooden horse within the walls of Troy. 'I distrust the Greeks, especially when they bring gifts.'"

"Good; that's just my opinion of the captain. I don't want to have anything to do either with him or his claim. I'm delighted to be out of the partnership."

"And I," said Jemmy.

"And I," said the author of this narrative.

"Shall we stick together like bricks?" asked Prawle.

"Yes, yes," we answered.

"All right then, let us begin business at once. We'll pack up our 'swags' and go to Iron Bark Gully."

"Why to Iron Bark Gully?"

"Don't you recollect the lady blacksmith at Carambong? She asked me to call upon her husband."

We "humped our swags"—that is, we placed our baggage on our shoulders—and soon reached Iron Bark Gully. As I have already remarked of other gullies, it looked like a deserted railway cutting. Tents were scattered here and there, and every now and then we saw a party of miners at work. We asked for a man called Skilbeck, and were recommended to apply at a store-tent where most of the Iron Barkers bought their groceries. The proprietor of the store knew the tent where Skilbeck lived, but did not know where he worked.

"Yonder is the tent," he said, "and Skilbeck will be home presently to dinner."

The front of the tent was shut up, and was guarded by a large black retriever dog which was chained to a log, and barked furiously at all passers-by. While we were waiting for Skilbeck we sat down to rest under the scanty shade afforded by one of the Iron Bark trees. These curious trees resemble a cork tree that has been burnt, but, as some of my readers may never have seen a cork-tree, I had better tell them that the outer coating of the Iron Bark tree is very thick, and hangs to the

tree in great irregular masses like lumps of rusty iron. We afterwards found this bark very useful for kindling fires.

We lay idly watching the sun creeping slowly upwards against the fork of a tree until he stood still, and then we knew that it was twelve o'clock. A few minutes afterwards a tall handsome man with a bushy brown beard and a curly brown head, and with the legs of his trousers all besmeared with blue and yellow splashes of clay, came striding along, whistling "Cheer, boys, cheer." Directly he arrived abreast of the tent the black dog ceased barking, and began to wag his tail violently.

"Mr. Skilbeck!" cried Prawle.

"Hullo!" he answered, turning sharply round. "Yes, I'm Skilbeck. What is it?"

"We've come from the Carambong Creek!"

"Have ye?" he said rather gruffly, as much as to imply, "What do I care if you have?"

"I've brought this from your wife," said Prawle, handing Mr. Skilbeck a letter and a good-sized parcel.

The letter was not long, but it took Mr. Skilbeck nearly ten minutes to spell it out. He then opened the parcel which contained two blue flannel shirts and other domestic articles.

"Come from the Carambong afoot?" demanded Mr. Skilbeck.

"Yes," said Prawle.

"Thank ye for fetching these here things. If you'll sit down, the lot of ye, on that log there, I'll give ye a bit of dinner. Down, Muzzler. Don't you be afeerd, young man,"—to Jemmy—"he won't venture to touch ye, if I says 'Down, Muzzler.'"

We soon grew as thick as inkle-weavers. Inkle, I may observe, by way of explaining this old-fashioned saying, is, or was, a coarse species of tape, the makers of which sat very close together.

"I'm rough and gruff," observed Mr. Skilbeck, "at the first onset, but a goodnatured action I don't forget."

He then told us an anecdote about Muzzler, which showed that the words "Down, Muzzler" were not always efficacious, even from his own mouth.

"T'other night I was acoming home from work just as it grew dusk. My hands were full of tools, so I flung an empty flour sack, which I wanted to bring home, over my head. Muzzler went on growling till I got within a yard of him. 'Hollo, Muzzler,' I says, 'don't you know me?' Instead of leaving off growling he flew at my throat, and hung on there. 'Hollo!' I says. Still he hung on. 'Hollo!' I says, fiercer than ever. Not a bit would he let go. I was beginning to feel throttled-

like when the sack fell off my face. As soon as he saw me he dropped like a shot, and began wagging his tail. He's a rare dog for 'possums, is Muzzler. Hey! Muzzler, 'possum, 'possum!"

At these words Muzzler ran out to the full extent of his chain and began to bark furiously up the nearest tree he could reach.

"See that? He understands like any Christian. But when he saw Sam Skilbeck with his face covered up he thought he must be a thief, didn't ye, Muzzler?"

"And do you live all alone here, Mr. Skilbeck?" I asked, as the owner of the tent sat smoking his after-dinner pipe.

"Yes, me and Muzzler and Banbury—that's our horse—lives all alone here. My mates live at Dead Dog Gully, where we're sinking a shaft. So the old lady wants me back again at the anvil, do she?" he said, addressing Prawle.

Prawle replied that blacksmithing, in Mrs. Skilbeck's opinion, paid better than gold-digging.

"Ay, so she says now, because we haven't dropped on it; we're barely earning stonebreakers' wagers at present. Wait till we drop on it, wait till we get a hole with five hundred ounces in it, then Mrs. S. will change her tune."

We found Sam Skilbeck a most useful friend; in fact I hardly know what three such greenhorns as we were in all matters appertaining to gold mining would have done without him. As we had no tent, for the old calico one we left in Señor Robinson's hands, he made us bring our blankets into his abode for the night. I went to bed very early, for I was quite tired out, and the wound in my neck was still painful. Some hours later I was woke up—I daresay by the noise of firearms, for everybody who had a gun or a pistol on the diggings made a point of firing it off and reloading it before going to bed, and as soon as these weapons were discharged all the dogs, and their name was Legion, set up a dreadful barking and howling, so that no wonder a new comer was disturbed by the din. At any rate, I woke up, and perceived in the dim light my mates and Mr. Skilbeck, our host, lying huddled together on the floor of the tent. But on casting my eyes in another direction, I saw something that startled me terribly. The head of a monstrous animal of a whitish colour was thrust through the tent-door. I could hear the sound of its breathing in spite of Mr. Skilbeck's snores. What could it be? It was far bigger than a kangaroo or any native animal I had ever heard of. Perhaps it was the Bunyip, a monster which is said to inhabit the Murray River, and which is a cross between an ostrich and a hippopotamus. I was so alarmed that, although poor Skilbeck

had been toiling hard all day, I ventured to pull his sleeve and wake him up. He took it very goodnaturedly.

"What's the matter, my boy?" he said. "D'ye want a drink of tea?"

"No, I want to know what that is?" I whispered in reply, pointing with my finger towards the tent-door.

Mr. Skilbeck burst into a hearty laugh.

"Ha! ha! Why, did he frighten ye? That's old Banbury, our white horse, he always sleeps with his head in the tent for company, and if you was to go outside you'd find Muzzler coiled up on his back."

In the morning Prawle roasted me unmercifully for being so easily alarmed, saying that he must advertise in the *Bendigo Times* for a nursery-maid, Master Stephen being too timid to sleep alone. But I believe if Prawle had not been told of Banbury's habits before going to bed and had suddenly woke up, he would have been just as much frightened as I was. Sam Skilbeck was very proud and very fond of Banbury. He had owned him more than nine years, a long time, as he observed, in a colony where people were always swopping horses, and watches, and dogs, and wives.

"I don't believe in so much swopping," he said. "I've got a good horse, a good dog, and a good wife, so why should I change 'em?" To which Prawle sagely answered, "Why indeed?"

Sam Skilbeck put us up to all sorts of dodges for saving our money, of which we had little enough to spare. He recommended us to buy our tent and tools at second-hand. "Every day," he said, "there's folks leaving the Bendigo, as don't never mean to dig no more."

"Having made their fortunes?" asked Jemmy.

"Well, not exactly; folks as has been unlucky, can't stand the work and such like."

We took Sam's advice, and for a moderate sum, secured a nice little tent, a set of picks and shovels, a puddling-tub, and a cradle. The last was the most expensive article of all, as it was, comparatively speaking, a complicated piece of machinery. I will describe it presently.

"Now," said Mr. Skilbeck, "I can see you young genelmen are as eager to mark out a claim, as Muzzler is to be up a gum-tree after a 'possum. But a dog can't climb, although he's very useful at the foot of a tree, and you can't dig, although——"

"Can't we dig?" cried Prawle, flourishing his pickaxe, "you shall just see us!"

"You can't dig, sir," answered Mr. Skilbeck, with a solemn shake of his head, "not as a real digger ought to dig. You're young, you're tender,

you han't been used to rough it. Take my advice, don't you attempt at present to mark out any claims, or sink any shafts; begin by working in old ground, and, first of all, get some notion of the work by visiting me and my mates over at Dead Dog Gully."

At first we scorned the idea of taking advantage of other men's labours by "fossicking," as it is called, in deserted holes, but Sam Skilbeck soon gave us some reasons for changing our opinion. "'Spose, said he, "you was toiling along on a hot day, with a heavy swag on your back, and a chap was to offer you a lift in his spring cart, wouldn't you be a fool to refuse? why of course you would. And in the same manner, you'd be silly to refuse making use of a hole which has been dug by another man."

"But what's the use of a hole," asked Jemmy, "when all the gold has been taken out of it?"

"Ah! that's jest the point," answered Mr. Skilbeck. "There's plenty of shafts along this very gully, that have never been properly bottomed."

"How came that to happen?" I asked.

"In twenty different ways. Perhaps the water came in, and drowned 'em out, perhaps they squabbled and split partnership, perhaps they heard of something better elsewhere, perhaps they lost heart, perhaps they'd no money. I'll show ye half a dozen such holes—they may be shicers,*—of course I can't tell—but there may be a fortune in every one of them. First and foremost, however, come over to Dead Dog, and see us at work."

So we visited the gully with this unsavoury name, and by dint of using our eyes and asking questions, picked up a good deal of useful knowledge. The stratum of soil which contained the gold was generally found in these gullies resting on a bed of decomposed slate, or pipe-clay as it was termed, so that when this pipe-clay was reached the claim was said to be bottomed. This pipe-clay lay sometimes within three feet of the surface, sometimes it was not reached for forty or fifty feet, but the majority of the shafts on the Bendigo, where the sinking is what is called "shallow," varied from six to five and twenty feet in depth. When the bottom is reached the miners begin to tunnel, or drive galleries sideways, supporting the roof of these underground passages by means of "struts" of timber. The shaft belonging to Messrs. Skilbeck & Co. was about twenty feet deep, and circular, exactly like a wall. When we went there the bottom had been reached, and they were sending up "wash dirt,"—that is, the blueish yellow marly

* That is, holes in which no gold is to be found.

stratum which contains the gold, if any gold is to be found at all. We asked Mr. Skilbeck if the grains and nuggets of gold were visible to the man in the shaft. "Not often," he answered, "unless the stuff is very rich, because the greasiness of the clay covers up every speck of gold in a dirt skin."

Now for the mining operations, as practised in those primitive days. Over the shaft were fastened three poles, straddle-legs fashion, tied together at the top, from which hung a block and pulley. Bill Appleyard was at the bottom of the shaft, "getting" with the pick, and filling bucket after bucket with the dirt so obtained. These buckets were hoisted up by Sam Skilbeck, and their contents emptied into a big tub, where they were puddled—that is, worked about by means of a spade and plenty of water by Toby Wheeler. This puddling process got rid of all the sticky mud. Nothing now remained but sand, gravel, and gold. This was shovelled in a mass into the "hopper" of the cradle. Wheeler rocked the cradle with his foot, while Sam poured water from a superannuated "billy" on to the hopper or sieve. All the sand and gold passed into the receiver below, the pebbles remained in the hopper and were thrown away. Then came the most interesting operation of all. Mr. Skilbeck placed this precious residuum of sand in a tin dish, and going to the edge of a pond, skilfully tilted the dish backwards and forwards, partly under water, so as by degrees to jerk all the sand out of it. But we were greatly disappointed to see how few were the specks of yellow metal that remained at the bottom when all was done.

"Little as you may think of it," observed Mr. Skilbeck in reply, "it's the richest take we've had out of this hole. I say, Toby," he shouted, "the stuff's turning out first-rate. Now Mr. Prawle and young gentlemen, look you here; this pinch of gold, which you laugh at, weighs a pennyweight; twenty pennyweights make an ounce; and if we can wash fifteen tubs a day—as we ought to do, between sunrise and sunset,—and they all turn out as well as this, we shall have earned three quarters of an ounce of gold, which, at seventy shillings an ounce, will come to about seventeen shillings a head. Not that that's anything to brag of. As my old lady says, I could do better at blacksmithing."

"And where do you keep your gold?" I asked.

"There ain't enough of it," laughed Toby Wheeler, "to give us much trouble. This wooden match-box will hold a pound weight, and you see it isn't a quarter full yet. Howsoever, we live in hopes of better days."

That afternoon Mr. Skilbeck pointed out to us, on Iron Bark Gully,

what he considered a likely hole. We at once set to work, fearing that somebody else would "jump" it if we did not take possession. We went into the bush, and, after a great deal of trouble, got three spars, on which to rig our windlass. The hole was filled with water to within half a dozen feet of the surface; but upon sounding with a stone tied to a string, we found the actual depth to be five-and-twenty feet. Mr. Skilbeck drily observed—though Prawle said he could hardly be dry on such a watery subject—that we had our work cut out for us. Next morning we began bailing out with the utmost vigour, and were pleased to see that before nightfall we had made a decided impression on the body of water, thus proving that the underground springs, if there were any, were of a trifling character. Day after day we worked away at the bailing process, which became more difficult the deeper we got, till at last one of us used to go down, and, sitting astride of a little platform such as sailors employ when they are painting the outside of a ship, sent up bucketfuls of water to his mates above. It was very dull, monotonous labour, quite different from the exciting picture we had formed of the gold-diggings at home. In our minds' eyes we had beheld eager crowds of men working close together, scratching up glittering nuggets by the handful. However, when Prawle announced, on Saturday night, that there were only four feet of water in the hole, we all looked forward anxiously to Monday morning, when we might really hope to begin searching for gold. Up to this time, except in Sam Skilbeck's tin dish, we had not seen a speck of the precious metal.

Sunday was strictly observed as a gold-mining holiday all over the diggings. There were no churches, but meetings were held for worship in several of the larger tents. Most persons, however, took the opportunity of doing a number of things on that day for which they had no time during the week. Mr. Skilbeck, for instance, washed his shirts and other wearing apparel. I saw him gravely ironing his black silk neckerchief with the head of a broad axe; he also baked a joint of meat, with potatoes, in a camp-oven,—quite a luxurious dinner, which he had invited his mates to partake of with him. A camp-oven, I may observe, is a sort of large iron pot, with a close-fitting lid; the article to be baked is placed inside, and hot wood-ashes are heaped around and on top of the vessel till the proper degree of cookery is attained. Everybody, I suppose, knows that a "damper" is merely an unleavened cake made of flour and water; but everybody does not know, till I tell them, what dreadful dampers we had been obliged to eat since we parted with that skilful cook, Tom Harvey. His culinary mantle had certainly not fallen on the shoulders of Jemmy Wallington. The first damper

Jemmy made was baked in the ashes, as we had not then bought a camp-oven. I dare say it had been kneaded very fairly, but it was so underdone and heavy, that we all suffered from the nightmare after eating it. He next went to the opposite extreme—it was charred through and through; it looked and felt, as Prawle said, exactly like a frying-pan without a handle. The next essay was baked in Mr. Skilbeck's camp-oven, and not badly baked, but it tasted most vilely of onions,—Jemmy having neglected to scald out the oven, which had been used on the previous Sunday for cooking a hand of pork. Prawle now insisted that I should take the damper manufacture in hand, and I succeeded pretty fairly.

The barking of dogs and the discharge of firearms was worse than ever on Sunday afternoon; for numbers of diggers, dressed in their best clothes, were stalking about the bush, popping at parrots, wattle birds, and such-like small game. Just before sunset a heavy shower took place, and I was surprised to see, as soon as the rain had ceased, that a number of persons issued from their tents, and began diligently examining the dirt-heaps at the mouths of the different shafts. We asked Mr. Skilbeck what was the meaning of this.

"They are looking for nuggets," he replied. "They often lie unnoticed in the dirt thrown out of the holes, till a heavy shower washes 'em clean."

On hearing this we all sallied forth, straining our eyes and stooping our backs till it was quite dark. Prawle and I found nothing; but we heard a joyful exclamation from Jemmy.

"How big?" asked Prawle. "As big as your head?"

"Not quite," answered Jemmy, laughing.

"As big as your great toe?"

"I shan't tell you. Come and see."

"Pooh! I think nothing of that," said Prawle contemptuously, when Jemmy had shown us a very pretty little nugget as big as a small pea. "I scorn to pick up anything under an ounce weight, eh, Mr. Skilbeck?"

Prawle was only chaffing; he was delighted at Jemmy's good-fortune. Mr. Skilbeck observed that it was a lucky "homen," and advised Jemmy to have the nugget made into a breast-pin, or, better still, send it home to his sweetheart.

The next day is marked in my Bendigo Calendar as Black Monday. Prawle began to descend the shaft, intending to stand at the bottom up to his waist in water, and send buckets up until the mine was dry. He went down hand over hand, or, rather, hand under hand; but being an awkward climber, he steadied himself by placing his feet against the

sides of the shaft. A piece of earth, to which he was trusting his foot, gave way: he lost control of his hands, and fell feet foremost to the bottom. We hoped that he was not much hurt, thinking that the four feet of water would break his fall. But he was evidently suffering great pain, although he tried to make light of his tumble. We were unable to see him very clearly in the obscurity of five-and-twenty feet below the surface, but we observed that he held his hands in a peculiar way; and he told us that unless we could pull him out of the shaft, he must stay there for the rest of his days. Upon hearing this, we lowered him a rope, one end of which we passed through the block at the top of our windlass, while Prawle made the other end fast under his arms; but our united efforts were unable to pull such a heavy fellow up. So we were obliged to go and entreat a neighbouring party of miners to come to our assistance. We were rather shy of going near them, for they were a rough, foul-mouthed set of fellows, who came from Van Diemen's Land. As diggers they were very lucky, but they spent all their earnings in drink, and when in liquor, quarrelled and fought with each other. We disliked asking them, but nobody else was at work within a quarter of a mile of us. The moment, however, they heard what had happened, they knocked off work, and came and pulled Prawle out. The poor fellow fainted dead away as soon as he "came to grass," and no wonder, for the rope had "slithered" through his hands, and had cut his fingers completely to the bone. He afterwards told me that he never had endured greater agony, and that if he had not had the water to dip his burning hands into, he should have become frantic. These rough Vandemonians were ever so kind; they carefully wrapped Prawle's hands in rags dipped in grease and flour; they went to their tent for the remains of a bottle of brandy—a very expensive article on the diggings at that time,—made him swallow a "nip," and insisted on his keeping the remainder. They warned me and Jemmy before they went back to work that poor Prawle would not be fit for work for a fortnight. "And take care," they said, "now the hot weather is coming on, that the blow-flies don't get at the sore places."

The blow-flies are certainly most repulsive creatures. The English bluebottles are bad enough, but they only lay *larvæ*, which require time and warmth to kindle them into life: their Australian sisters lay living maggots; and nothing pleases them better than to lay them in the living flesh. Woe to the bullock that has a sore back! Woe to the drunkard who falls, wounds his skin in falling, and then sinks into a heavy apoplectic sleep! During the summer, we made acquaintance with a young man who had been a linendraper's assistant in London.

He was a very nice-looking, fair-skinned, rather womanish fellow in appearance, but with plenty of pluck about him. He went to work on the diggings, and rashly exposed his bare arms to the scorching sun. The heat raised his tender skin in blisters, the fiendish blow-flies got at the blisters. Poor fellow, he was a dreadful spectacle! He recovered at last, but he will carry the scars to his grave. As for the impudence of the blow-flies in smaller matters, it almost passes belief. In those days the butchers were very independent—they would cut no small pieces; you must either take a quarter of a sheep, or go without mutton. I used to put the meat at once into a sack, and carry it home to the tent; but as two or three blow-flies would contrive to get into the sack at the same time, the meat was generally covered with maggots, every one of which had to be carefully scraped off. In the hot weather I used to hate the sight of fresh meat thrice a day; especially when, as once or twice happened, we had no salt, and not a particle of bread to eat it with. Mr. Skilbeck used to keep his meat carefully secured in a bag, and slung over the limb of a tree at a height of some twenty feet from the ground. He declared that the blow-flies never flew so high.

While on the subject of flies, I may say a few words about the common house flies, which in hot dry countries, such as Egypt and Australia, become a perfect torment. In the much warmer but moister climate of Bengal, the ordinary flies are comparatively few in number, and seldom trouble you. There is a reason for this. The common fly (*musca domestica*) is a very thirsty creature, and when he settles on the human face divine, it is for the sake of the moisture which he finds there. They have a curious habit, also, of settling on the back of persons walking out of doors, probably because it is the only part of the body which is not in violent motion. I once walked down from the diggings with an amusing fellow, who stepped out at such a prodigious pace that after a few miles I was compelled to drop astern. He walked as if he was walking for a wager, and I remember that his chief grievance was that he had to carry "a pound weight of flies" on his back. It used to be considered a breach of good manners in Melbourne, if you did not whisk a handkerchief over your back before entering a house, for no lady desired an additional importation of flies to her drawing-room. In fact, a visitor with flies on his back was reckoned as rude and as unwelcome, as if he had had mud on his boots. The flies were really a serious plague during the summer months. Men wore veils or carried green boughs in their hands as a protection against them, and the latter custom gave the bullock-drivers, who are generally

among the roughest of Her Majesty's subjects, an appearance of Arcadian simplicity. I have often amused myself with watching the involuntary gesticulations made by persons when talking together in order to get rid of the flies. I believe the plague of flies in hot countries might be much abated if all decaying animal and vegetable matter was burnt or buried, and their thirst which renders them so tormenting, may be allayed indoors by occasionally watering the floor, and by placing shallow vessels of water about the room. Enough about flies. People who have never quitted England don't know how much we owe to our chilly winds and foggy skies. Setting aside bugs and fleas and blackbeetles, all of which may be kept under by cleanliness, insect life rarely produces human misery in this country.

Prawle's accident was a sad blow to our gold-digging prospects, for Jemmy Wallington and I could not do much by ourselves. However, we did do something. We bailed all the water out of our shaft, and then perseveringly sent up bucket after bucket of stuff which we believed to be wash-dirt. For any advantage we obtained, we might as well have been grubbing among the gravel pits on Hampstead Heath. "Yes," said old Prawle, who was reading a dog's-eared romance belonging to one of the Vandemonians, and entitled "Cariboo the Cut-throat: the True Story of a North American Indian, who devoted himself to Deeds of Robbery and Murder at the East End of London," "Yes, and on Hampstead Heath you would have a decided advantage."

"We should be nearer home," observed Jemmy.

"Ay, and you wouldn't be noticed so much as you are here, because there would be other donkeys about."

"Thank you," said I. "Prawle is getting better decidedly, Jemmy, he has made a joke."

We consulted Mr. Skilbeck concerning our mine. He very kindly went down the shaft at daylight the next morning, tried all round with the pick, and sent up many bucketsful of wash-dirt. As these bucketsful did not yield a particle of gold, Mr. Skilbeck pronounced the shaft a "shicer." "If there had ever been any gold in it," he said, "they'd have left some behind 'em. They couldn't have cleared it out entirely."

We began to grow rather despondent. Prawle would be fit for no harder work than "Cariboo the Cut-throat" for some time to come, and our little stock of money was rapidly dwindling away in the purchase of provisions. Flour was two shillings a pound, sugar was half a crown a pound; everything was dear except butcher's meat.

Jemmy and I tried several other deserted shafts, but not a speck of gold could we find in any of them, though that was probably owing to

our unskilfulness. We began to think that Fortune had marked us down in her black books, when our excellent friend Sam Skilbeck made us a proposal.

"My mate, Bill Appleyard," he said, "wants to go down to Melbourne for a fortnight. His missis has come out aboard of the *Boomerang*. Me and Toby are agreeable to take in one of you two till Bill comes back, and we'll give you a third share of all we make during that time."

Our eyes sparkled. Both of us wanted to join Sam Skilbeck.

"Which do you choose?" I asked, after we had thanked Mr. Skilbeck.

"Well, me and Toby would sooner have the biggest. But don't you look so glum, Master Stephen, I've got a job for you too. You know Tom Prince as keeps the store down the gully, where the blue-spotted flag flies?"

Mr. Prince was our grocer, so of course I answered "Yes."

"Well, Tom Prince wants an assistant. He wants somebody as he can leave in the store, while he drives down to the Camp, and as he finds it lonely at nights, he wants his assistant to sleep there. I recommended you, Master Stephen, 'tempory.' A pound a week and your tucker* isn't to be sneezed at, even on a gold-field."

To us the field had hitherto been anything but a field of gold, so we both joyfully accepted the offers. Jemmy went to Dead Dog Gully, returning to spend the night with Prawle at our tent; while I proceeded to the Coggeshall Store—as Mr. Prince's establishment was named. As Prawle did not care to be left alone, he proposed to spend the daylight hours in my society at the store, observing to the proprietor that, although unable to use his hands, his wits might possibly be of some service. He then craved a private conference with Mr. Prince, in the back part of his tent.

An hour afterwards he emerged, dressed in an extraordinary costume. He wore a cocked hat and a swallow-tailed coat, ingeniously constructed of brown paper, his long legs were incased in a pair of thigh boots, and a scarlet sash ornamented his waist. On his hat and coat were written in large letters, "Coggeshall store, No. 197,325, opposite a gum-tree, Iron Bark Gully! The cheapest and best Clothing and Provision shop in the Australian Colonies!" He then proceeded to perambulate the neighbourhood, having first rehearsed the following speech:—

"Fellow diggers, I am not a mountebank, though I look like one. I adopt this dress simply to attract your attention. I want you to patronise Tom Prince, a really honest fellow, who sells you a good

* Provisions.

article at a moderate price. You may ask why I loaf about instead of working. I am a digger like yourselves, but I slipped down a shaft, and took all the skin off my hands. In a fortnight I hope to be a digger again. Don't forget the address—No. 197,325, opposite a gum-tree. You can't mistake, if you bear in mind that it's opposite a gum-tree.'

I candidly confess that I felt rather ashamed of Prawle as he marched away; he looked such a regular Guy.

"I'm sorry, Stephen, that you think I made a fool of myself," said Prawle that evening after we had shut up shop, "but I had a reason for my foolery. I wanted to do Tom Prince a good turn, and I have been the means of putting several ounces of gold into his pocket."

This was perfectly true. Storekeeping on the diggings, in those days, was carried on upon a very primitive plan. Nobody had then hit on the idea, though it has since been extensively carried out, of sticking advertisements on all the gum-trees, still less had anybody conceived the notion of dressing up a human being like a Merry Andrew and sending him forth as a walking advertisement. The various diggers along the line of route which Prawle took stared when they saw such an extraordinary figure approaching, set him down as "a cranky fellow" who certainly had "a shingle short," or, as we say in England, who had "a slate off the roof"; but, nevertheless, when they entered into conversation with him, they were obliged to allow that there was a kernel of shrewdness and good sense under his outward shell of buffoonery. It was Saturday, the day for laying in their weekly supplies, so several of them said—

"Let's go and have a look at this Tom Prince's place!" and ended by buying largely.

The storekeeper showed his gratitude by presenting Prawle with a Westphalia ham, a welcome change after so much fresh meat.

I did not exactly dislike the life at Tom Prince's place; there was generally plenty of work to do, and plenty of variety in my occupations. At one minute I was weighing out tea and sugar, then I was cutting slices from a flitch of bacon with a sharp knife, then I was opening a tin of sardines for a customer who had never seen such an article before, then I was helping a man to try on a pair of new boots. These great rough bearded fellows were as fastidious about the fit of their boots as any young lady; they would sit on a tree-stump in front of the tent trying on pair after pair, and as I had to do all the pully-hawley work in getting them off again, I found the boot-department one of the hardest in our business.

"How my sister Lucy would laugh," said I, "if she could see me now. 'So this is the end of all your grand expectations, Steve,' she would say. 'Sixteen thousand miles of travelling, and only a shop-boy at last.'"

Prawle, however, declared that Lucy—though he had never set eyes on her—must be far too sensible a girl to utter such nonsense. "If I was your sister," he said, "I should like you all the better for learning a fresh trade and turning an honest penny, at a time when you are incapacitated from digging by the crippled condition of your unfortunate mate." Prawle uttered these last words with the whine of the regular professional mendicant, and with such a roll of his goggle eyes that I burst out laughing. "I can tell you I'm getting tired of idleness," he continued, with a yawn. "I've read 'Cariboo, the Cut-throat,' twice through, and I've got nothing whatever to do.

"I'm a poor chap from Liverpool,
And I've got no work to do,
I've got no work to do-o-o-o."

"Yes, I have," he suddenly cried; "I've got an idea—a splendid idea! Mr. Prince," he said, addressing the storekeeper, who was just dismounting from his spring cart, "will you, as Buckstone says in the play, 'Lend me five shillings'? On second thoughts it will be more convenient if you make it ten." The storekeeper handed Prawle a one-pound note, and he at once strode away as fast as his long legs would carry him towards the camp, where the wholesale stores were situated.

"He's a clever fellow," observed Tom Prince, "I wonder what he's up to."

But just then some customers came in to sell gold, which put a stop to our conversation. Tom Prince did a good business as a gold-buyer, partly because he never pressed people to take his goods in exchange for their gold, but still more because he was thoroughly honest. The poor hard-toiling diggers were exposed to many rogueries in this respect. Some storekeepers used to insert a small piece of paper into the box-end of the scale, so that an undue quantity of gold was required before it would kick the beam. One ingenious gentleman wore a great deal of bear's grease on his hair, and he would run his fingers through his oily locks and then sift the gold which lay on the counter before him. Some of it used to stick, just as the coin stuck to the yard measure in the *Forty Thieves*, and the combings of his head yielded a valuable harvest. But the storekeepers were themselves liable to be taken in. Base metal was purposely manufactured by the Chinese, and also, I am ashamed to say,

in Birmingham, and this rubbish was exported for the adulteration of genuine gold.

Prawle returned with several parcels in his hand. He then obtained some sugar from Tom Prince, and began to boil it to a syrup in a large billy.

"He's making toffey," said I, rather scornfully. "The diggers won't eat toffey, Prawle!"

"Wait and see," he replied, mysteriously.

In the course of the day he requested our presence in the back part of the shop. He was standing with a tumbler and two black bottles before him, and reminded me of Professor Capsicum at the Polypicnic Institution when he is about to perform an experiment.

"Gentlemen," said Prawle, addressing us with as much gravity and formality as if we were five hundred people. "Gentlemen, you observe the simple apparatus now before me. Here is a tumbler which I fill with water, filtered for the occasion by Skilbeck's patent process. I pour in some of the contents of one bottle, and stir it with a spoon. Upon adding a small portion from the other bottle you will perceive that effervescence takes place. Please to taste the result." He handed a foaming glass to Tom Prince.

"Capital!" exclaimed Tom, as he smacked his lips after emptying the glass.

Prawle next furnished me with a tumbler; he then produced a sheet of paper on which he had written in large characters—

"Prawle's Celebrated Ginger Beer! Sixpence a Glass!!"

"I should like," he said, "to go down to posterity as the author of something. I can't write a book, so I have invented a beverage."

Prawle's effervescing drink consisted of nothing more than sugar-syrup, powdered ginger, carbonate of soda, and tartaric acid; but it took wonderfully with the diggers. They called it "jump-up," and they spent their sixpences as freely as working-men at home would spend their pennies. And Prawle felt quite proud when one day the Gold Commissioner—who was the greatest man on Bendigo—drew up before the tent door with fifteen mounted troopers under his command, munificently ordered glasses round, drank a glass himself, and having laid down a one-pound note in payment, galloped off without demanding change.

The weather was becoming hotter every day, and many of the ponds and little streams which had been formed by the winter rains were

drying up. We soon had to go some distance in order to procure water for making our tea, and this water was literally the colour of pea-soup, being highly charged with the unctuous clay of the district. But it did not make bad tea, and, if you will believe me, the clay gave the tea a creamy flavour, which, in the absence of milk, was very acceptable. Then Sam Skilbeck showed us a simple way of filtering this muddy water. Overnight he filled a tub with water, and threw into it several pieces of red-hot charcoal. In the morning, the mud had all sunk towards the bottom, leaving a perfectly transparent stratum, which could be skimmed off with a pannikin.

I may mention here that the fifth of November was observed on the Bendigo in a very noticeable manner. No Guy Fawkeses were carried about, for there were no little boys and girls to care for such things; but at night the whole country in every direction was lit up with enormous fires, while the discharge of fowling-pieces, carbines, pistols, and revolvers was enough to worry any nervous old lady out of her seven senses. But I don't suppose there were many nervous old ladies on Bendigo at that time; it was not exactly the place for such people. Except on a bright moonlight night, it was scarcely safe to be abroad after dusk. One was apt to tumble down miners' shafts, or, still worse, to stumble unintentionally against a tent, when a ferocious bull-dog would rush out and pin you by the throat, or perhaps the owner would idly fire a random bullet through the canvas of his frail dwelling, as a hint that you had better make yourself scarce.

One moonlight night, Mr. Skilbeck invited me to go out with him on a 'possuming expedition. As Tom Prince was away on business, Prawle stayed to look after the Coggeshall Store, while Toby Wheeler came over to Skilbeck's tent to keep an eye on Banbury.

"Not as I fancy old Banbury will stir," observed Mr. Skilbeck. "I don't believe he'd take his nose out of the tent if a field of clover was to grow up in the night within a hundred yards of him."

"Why do you call him Banbury, Mr. Skilbeck?"

"Don't you recollect the nursery rhyme, Master Stephen?—

> 'Ride a cock-horse to Banbury Cross,
> To see a fine lady ride on a white horse.'

My missus christened him Banbury on account of his colour."

Presently after this we started on our expedition, accompanied by Muzzler, who was in the most intense state of excitement. We had not got a mile away from the tent, when he began barking furiously at the foot of a tree.

(To be continued.)

Trades connected with Science and Art.

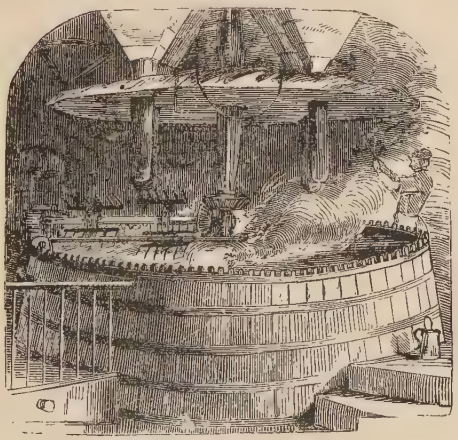
BY THOMAS ARCHER.

BREWING AND DISTILLING.

IT may be thought that the trade of the brewer has little to do with science or art, whatever may be the case with that of the distiller; but when we consider how large an industry is comprehended in the manufacture, not only of beer and ale, which are each common beverages, but also in that of vinegar, and of various descriptions of spirits used for different purposes, it will be seen that considerable chemical knowledge, as well as some mechanical ability, must be necessary to carry on these businesses effectually.

It is not our intention to enter into any discussion as to the benefit or injury resulting from the use of fermented drinks. In all ages of the world, and in every nation of the earth, they have been largely consumed, either in the shape of wine or of some kind of beverage which, taken in small quantities, has had the effect of stimulating and often of strengthening the bodily powers, while an excessive indulgence in it has always resulted in disease, temporary mania, and frequently in acts of barbarous wickedness. To say that fermented drink is poison is no more than saying that, unless it is used with prudence and temperance, it will cause disease and hasten death. The same may be said of excessive eating, or of any gratification of a degraded appetite.

It is especially among the northern nations of Europe that ale or beer has been in use as a beverage from a very remote period of the world's history. By beer, we mean, of course, the liquor made from the fermentation of malt, with the addition of the flower of the hop plant. Various other vegetable substances have been—and it may be feared that some are still—used to increase the narcotic, or stupefying properties



BREWING AND DISTILLING.

of the beverage, but we need not here enter into a description of them, since we have only to describe the proper trade of the brewer, and not the vicious or dishonest practices of the adulterator.

The word beer is found both in the old and new dialects of the high and low German, Dutch, and Flemish, where it is called *bier;* in France it is *bière*, and in Italy *birra*. In these latter countries it has superseded the old word *cervoise*, still used in Languedoc, *cervogia*, still heard in Italy—both of which, like the Spanish *cerveza*, are from the Latin, *cervisia*, a word used by Pliny for a drink made from malt.*

In Anglo-Saxon it was *beor*, and *eale*, or ale, probably a cognate word with the old *öl*, which is still used amongst the Scandinavians. In Norsk it was *bior;* in Gaelic, *beôir;* in Breton, *ber* or *bier;* and Tacitus says that the Britons made a sort of wine from barley which they called *baer*.

In England, before the introduction of the hop, beer became almost universally known as *ale*, and was made from the sweet liquor of fermented malt. In old songs, ballads, and stories, the praise of ale is celebrated over and over again, and it was the common drink even of the higher classes of this country.

When the hop was used, the ale, in which it was infused, was once more called beer, in order to distinguish it from the sweet, unhopped ale. In our own day the words ale and beer are used almost indifferently since all malt liquor is mingled with the infusion of the hop-flower; and the distinction is only between sweet and bitter ale, and that sort of beer, which is deeper in colour and with greater body, and is called stout or porter, the latter word having been adopted in compliment to the porters or carriers, who were the great consumers of that particular kind of beverage when it was first introduced in London.

The hop seems first to have been used as an addition to the wine of malt by the Germans, and the hop-gardens are spoken of in documents of the early part of the ninth century. From the Low Countries, or from Artois, which borders upon them, it was brought to England about the year 1524, after the expedition of Henry VIII. against Tournay, and, at that period, people were greatly opposed to the use of it. Warnings and condemnations, in prose and verse, were published against the mixture of "sulphur" with the ale; and this, probably, refers to the practice which was then common, of curing or preparing the hops with sulphur, before using them for brewing. It would appear, from the laws then made, and afterwards enforced, even as late as the reign of James I., that damaged hops, partially preserved by sulphur, were

* Johnston's "Chemistry of Common Life."

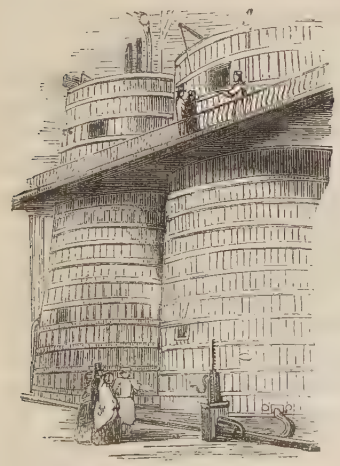
brought to England, so that the people were prejudiced against them; but the use of this most beneficial addition to the malt-liquor soon increased, and the hop-gardens of Surrey and Kent are now of great value, while large quantities of the dried flower are also brought from Germany, Belgium, and Bavaria. The properties imparted to beer by the hop are very useful and important; for the plant is an anti-scorbutic, so that, as an old writer says, "The ale which our forefathers were accustomed only to drink, being a kind of thicker drink than beere, is now almost quite left off to be made, the use of hoppes, to be put therein, altering the quality thereof, to be much more healthful, or rather physicall, to preserve the body from the repletion of grosse humours which the ale engendereth."

It is also a fine tonic, and a narcotic, and, though the latter quality may not be appreciated by those who do not drink beer—since it makes the liquor "heady,"—it has the advantage of saving the malt, and rendering the draught less intoxicating, for the narcotic effect of the hop is not from an alcoholic or intoxicating property. In other words it makes people sleepy, but does not make them tipsy. But there is still another important use in this plant for the purposes of the brewer. It has a chemical influence which not only clarifies the beer, but by arresting fermentation at the alcoholic stage, prevents its turning sour. It was only after the introduction of the hop that beer could be kept for any length of time.

The art of brewing may be said to consist in extracting the sugar from grain in a solution by water, and converting that solution into a sound spirituous beverage by means of fermentation.

The various kinds of beer, such as ale, porter, and stout, are produced from different kinds of malt; and, if they are genuine, the diversity of colour depends on the malt used, the pale and amber sort being selected for ales—the brown malt for porters, and the roasted or black malt for colouring the dark beer, such as porter or stout, so that the paler the malt is dried the lighter the colour of the beer. Malt is made from barley, first steeped in water, in order to promote the sprouting of the grain, then placed on a floor in order to allow the "acrospire," or sprout, to germinate, and afterwards dried or roasted on a heated surface for the purpose of arresting the growth, and so preserving the sugar that has been formed in the process of germination. When the grain, in this condition, is ground, and the meal steeped in water, the liquor forms what is called sweet wort: the sugar and the diastase (a substance formed in malting from the starch and the gluten of the grain) are dissolved, and the diastase, acting on that portion of the starch which is

not thoroughly malted but which remains in the meal, changes it first into a kind of gum, and afterwards into saccharine matter. When this liquor is allowed to stand it ferments, and the decomposition of the gluten produces a frothy, thick liquid, called yeast. This liquid, when added to any liquor containing sugar and gluten, will cause it to ferment more rapidly than it would do of itself, and for this reason a proportion of yeast is generally added to the wort, in order to promote its rapid fermentation in the brewing of beer. Whether beer be made in large or small quantities, with enormous vats and tuns, great coppers, and coolers, and



Store Vats.

Brewery.

vessels as large as houses, such as those of the great London breweries, or is only brewed with a few homely utensils, pots and pans, and tubs, just sufficient to make a few gallons, the operations are much the same. The crushed malt is "mashed," or thoroughly mixed with water in a mashing tun or tub, and after standing for a time the liquor is run off into another vessel; it is then boiled, and after the first boiling is run off; the second boiling of the malt makes a weaker and inferior wort for "table" ale; or may be added to the first so as to make an ale of medium strength. When the wort is in the copper the hops are added; the whole contents being stirred together during the boiling process. The liquor is then run off into shallow vessels to cool. These vessels are placed in a current of air, or sometimes are provided with revolving fans, in order to decrease the temperature as quickly as possible. The liquor is then conveyed to the fermenting-vessel, where it is allowed to work, the yeast being added

to promote this operation. The final operation, when the fermentation has thinned or cleared the wort, and a certain quantity of the sugar has been converted into alcohol—is that of conveying the liquor to smaller vessels, where the yeast or froth is skimmed off, or otherwise removed from the surface; the beer, then, has only to be run into the fining vats, where it is sometimes cleared with isinglass or other gelatinous matters, and is afterwards ready for use. It is very necessary, in all these operations, to attend to the temperature and the specific gravity of the wort; and, for this purpose, the thermometer and the hydrometer have both to be used. The proportion of malt and hops, to the quantity of water used, depends, of course, on the quality of the ale or beer to be brewed.

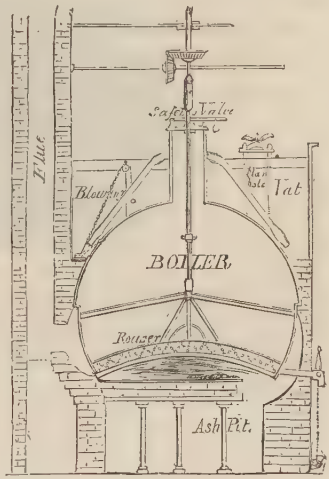
It is not in England alone that the consumption of malt-liquor is enormous; throughout Germany and Bavaria, as well as in other countries of Europe, the manufacture has lately increased. At the Vienna brewery, where that sweet and pleasant beer, so largely sold in Paris at the last Exhibition, is produced, above nine million gallons were brewed during the last year. This brewery, which is known as the Schwechat, was commenced in 1632, and from a small place, just supplying a part of the district, it has grown into the largest manufactory of beer on the continent of Europe: the increased trade having been effected since 1836, when the production was only 310,000 gallons.

There is a fashion in ale as in most other things, and of late years the highly-hopped light bitter ale made at Burton-on-Trent has become the most popular. Burton was always celebrated for good ale, although it was not much known in London before the year 1623, when the Derby ale, as it was called, began to be in demand: that liquor was not the bitter beer which is now so much in request, but a sweeter and more mellow beverage. The brewing-trade of Burton is now so extensive, that in a description of the operations necessary for the manufacture of ale, we cannot do better than describe the processes as conducted at one of its great breweries, where 50,000 gallons of ale are made every day during the season. As the quality of the water is a very important consideration in the brewing of fine ales, there are two wells at this establishment, which supply many thousands of gallons of water per hour. These, with the cooperages and immense range of stables and carpenter's workshops, represent the outside portions of the establishment.

The first operation of brewing begins at the malt-houses in the brewery-yard. In each of these buildings an enormous shallow tank contains nearly 6,000 gallons of water, in which about 1,200 bushels of barley are steeped, in order to make it sprout or germinate, for conversion

into malt. From these tanks the barley is removed to the "frames," or large troughs, whence it is carried to the malting-floors—great floors, some of which are thousands of square feet in extent. On them it is spread out in various thicknesses, according to the quality of the grain, and is allowed to remain there from ten to fourteen days, for the development of the "acrospire," or germ. This germ is not allowed to sprout and burst from the husk of the seed. In order to arrest this growth, when the acrospire is once formed, the grain is removed to the drying-kilns, where it is again spread out on a flooring of perforated

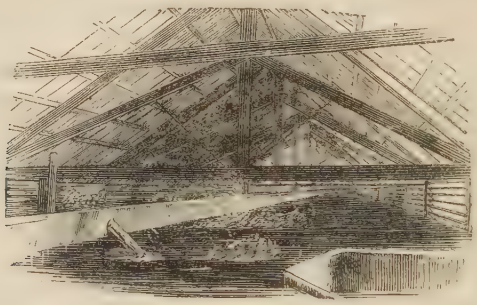
Top of Ale Wort Boiler.



tiles, beneath which furnaces are so arranged as to distribute a regular degree of heat. After four or five days drying, the malt is formed, and, after being cleaned of the "coons" or roots which grow out during germination, is ready for the store-rooms, which are at the top of the brew-house. From these store-rooms the grain is conducted into the hoppers of a mill, where it is ground, or rather crushed; and from the mill a screw moved by steam machinery conducts the meal to the "hoppers," and through them down "shutes" to a horizontal cylinder. In this cylinder, which is supplied with water, several revolving rakes are continually in motion, mixing the meal with the water before it runs off into the mash-tuns on the floor below. In these mash-tuns, which are supplied with hot water from enormous coppers, the liquor, which is called sweet wort, remains for several hours.

The mash-tuns have double bottoms, one of which is perforated; so that, on removing the other, the wort runs off into the "underback,"

from which it is pumped into the great boiling coppers, where the hops are added, floating on the surface of the liquid until they are saturated with the wort, which boils up in great flakes of foam. When the boiling has extracted the virtue of the hops, the wort is conveyed by pipes into the "hop back," which holds about 4,000 gallons, and has a false bottom of perforated metal, through which the liquor is strained into the lower part of the "back." From there it is pumped into a series of shallow tanks called "coolers," lined with white porcelain tiles,



and situated in a great lofty room fitted with "louvre" windows, that is, with open windows where boards are fixed which will work like the laths of Venetian blinds, and so regulate the current of air. The quality and perfection of the ale depends so much upon the rapid cooling, previous to fermentation, that in summer the process is hastened by refrigerators, consisting of a series of small pipes supplied with cold water. From the coolers the wort is run off into the fermenting-tuns, of which there are about sixty, each holding 3,600 gallons. Here the yeast is added, in order to induce fermentation; and when the wort has reached a certain stage of thinness, it is again run off into "union casks," a series of 1,200 casks, each containing 160 gallons, and suspended in double rows in frames in such a manner that they turn round upon their axes by the aid of machinery. This motion completes the fermentation, separates the yeast from the ale, and enables it to run off by pipes shaped like swans' necks. Then the beer, bright and clear, is removed to the racking vats, or tuns, on the basement floor, from which it is at last drawn into the casks.

On a still larger scale are the principal London breweries, celebrated alike for porter and "fine ales." Those of Truman, Hanbury, & Buxton; Whitbread & Co.; and Barclay & Perkins, have long been noted all over the world; and there are others which also carry on a gigantic business. Indeed brewing, when properly conducted, appears to be a very pro-

fitable business, but requiring a great deal of money for the establishment of the necessary machinery and the purchase of materials in large quantities. It is evident also, from what we have said, that a brewer should possess some knowledge of chemistry, and learn to distinguish between good and inferior grain, as well as the various qualities of hops.

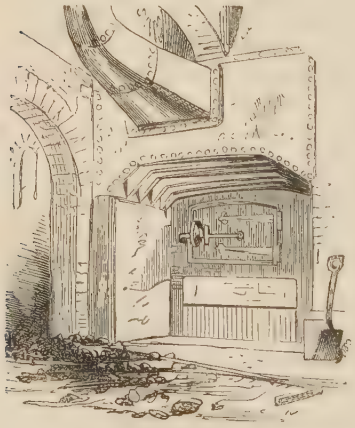
Distilling

is the art of extracting the aromatic essences of plants and flowers, or the peculiar properties of grain, by means of heating the liquor in which they have been steeped until their more volatile portions arise in vapour; and this vapour being immediately condensed by the application of cold, becomes liquid, and is called essence or spirit. There is little doubt that the Arabians practised distillation from the earliest periods; the very word "alembic"—the vessel or crucible used in the process—being derived from the Arabic *al ambix*, or "the pot"; so that the Irish name for whisky, "poteen," is quite correct when used to signify liquor produced by distillation in a crucible. It would be impossible to give a detailed description of all the methods employed in producing the delightful perfumes, which are the extracts of flowers and other substances mingled with pure spirits. The business of the distiller is more generally intended to refer to the manufacture of alcoholic drinks, which are used as stimulating medicines, or, when much diluted, as occasional beverages. It cannot be denied that the habitual use of what are called ardent spirits has produced very terrible evils in the world, and they should only be used under circumstances where they may be regarded as necessary medicines by those to whom a stimulating beverage in large quantities would be injurious. Rightly or wrongly, however, an immense quantity of brandy, rum, whisky, and gin is every year consumed; and to produce these alcoholic liquors an abundance of grapes, wheat, rye, barley, oats, buckwheat, and maize is used on the continent of Europe, in Great Britain, and America.

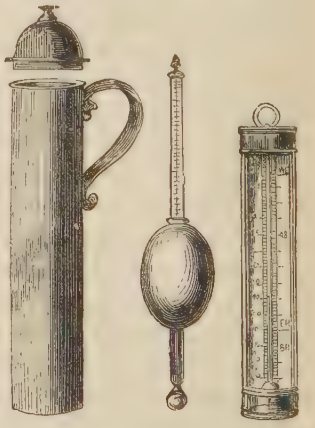
In the manufacture of whisky and gin, or any other liquor distilled from grain, the first operations are the same as those of brewing; but the fermentation of the wort is kept up until the liquor becomes clear and as much as possible of the sugar is converted into alcohol. This liquor, which is called wash, contains rather more than an eighth part of what is called proof spirit, and it is necessary to obtain this spirit from the water and other ingredients. For this purpose the wash is run into a closed iron cistern which will hold many thousands of gallons, and thence into the "still," a copper vessel nearly as large, the top or cover of which decreases in size till it becomes only a tube, and joins another winding or spiral tube called the "worm," inside a large vat or

tub called the worm-tub. The fire under the furnace of the copper sets the liquid boiling; and as alcohol boils and passes off in vapour at a temperature of 180°, while water requires a temperature of 212° Fahrenheit, the spirit goes off in vapour with very little admixture of water, and passes into the worm-tube. The tub in which this tube is placed is constantly supplied with cold water, so that the vapour is condensed, and flows out at the narrow end of the worm. This liquor is called "low wine," and is placed in another still, where it undergoes a similar process to the first, until it is refined into "proof spirit" —that is, one-half spirit and one-half water. A certain bulk of distilled water weighs thirteen ounces, and an equal bulk of proof spirit weighs just twelve ounces; so that the proof of the spirit may be ascertained by the hydrometer, an instrument constructed for the purpose. The strongest spirit produced by distillation is 70° over proof; and spirits of wine is about 43° over proof. The raw spirit obtained from grain has to be "rectified"—that is to say, brought to the proper degree of strength and mixed with whatever is used to flavour it. Pure whisky, however, is seldom flavoured, unless by being stored in old sherry casks; gin is flavoured with juniper-berries and sugar.

The liquor called rum is distilled from the juice of the sugar-cane, and is generally carried on in conjunction with a sugar factory, the best being manufactured in Jamaica from the uncrystallized syrup of the cane, known as molasses. True brandy is a spirit procured by distilling wine and the residue of the grapes of which wine is made. It varies in quality and flavour according to the particular wine used for the purpose.



Stoke-Hole.



Hydrometer Can. Hydrometer. Thermometer.

The Letter of Marque.

By LIEUTENANT C. R. LOW, (*late*) I.N.

CHAPTER IV.

FOR a passing minute I was overpowered by the magnitude of the disaster, but my presence of mind soon returned. Springing down to the quarter deck, I called out to the crew to follow me and cut away the wreck, which, as it was hanging about the ship, endangered her very existence. Every man on board answered my appeal; and, with axes and tomahawks, we speedily hacked away the mass. Fortunately the sea, seemingly tired out with the work of destruction, at the same time ceased its violent attacks on the helpless hull floating entirely at its mercy. There was a temporary lull while we cleared away the wreck, which fortunately floated astern harmlessly, for had it fouled the rudder it might have rendered the *Red Hawk* unmanageable.

After this the gale moderated, and soon a break in the sky, and a gleam of sunshine, gladdened the hearts of the ship's crew with the prospect of fine weather. As soon as it was practicable all hands turned to with a will, and we set to work "jury-rigging" the old barque. Our spare spars, having been well lashed amidships, remained to us, and with these we managed to rig a fore-topmast, and get a top-gallant-yard across for a fore-topsail-yard. We also succeeded in rigging a jury main-topmast, though we had to do without a mizen-topmast, as the supply of spars was exhausted; however, we got aloft some sort of a spanker-gaff, for we had lost the old one, and, having a spare driver, set it. With courses and topsails, reduced to a medium size between topsails and top-gallant sails, for square sails, and with trysails and fore and main staysails—we were well enough off in what are called "fore and aft sails"—altogether we managed to do tolerably, and only prayed

our ill luck would not throw us in the way of a French man-of-war, from which we could not hope to escape.

As for carrying on our predatory pursuits, our occupation was gone; for how could the *Red Hawk*, out of which we could just screw some five knots under the most favourable circumstances, hope to overhaul the most sluggish of French merchant ships? Under the present adverse conditions she resembled her namesake the proud bird of prey when its wings are clipped and it is powerless to pounce on its prey. "Yet there was life in the old bird yet," and when all other resources failed we had recourse to stratagem.

I should have put in at the Cape for repairs, but at that time that part of southern Africa was in the possession of the Dutch,* and, as our political relations with that nation were not very cordial when we left England, I did not know but that I might be detained, or that war might break out before I had completed the necessary repairs. I therefore resolved to make the best of my way to Bombay. It was very provoking, but, whereas before our misfortune we never saw a French sail, now that we were shorn of our plumes several trading ships of that nationality passed us, some even showing the Republican tricolour at the mizen peak, as though in contempt for our helplessness. Any moment also we might expect to fall athwart hawse a man-of-war, and then, alas! for "la belle France" and a dirty French prison, for by the accounts of those who had escaped from these places of incarceration for prisoners of war in that country, the dens in which wild beasts belonging to travelling menageries are confined were infinitely preferable to them. However, as the days passed by, and week succeeded week, we became less anxious, and trusted good luck would waft us into Bombay in safety; we had already crossed the line, when all fear of capture was lost in disgust at seeing so many of the enemy's merchant vessels pass us unmolested. At length I determined to adopt a ruse so as to gain at least one prize. I only awaited a favourable opportunity.

One morning, directly the look-out took his first scan all round the horizon, he descried a large, full-rigged ship standing in our direction. The word was passed to the deck, and the officer on duty came to report the fact to me. I took my way aloft, and, with the aid of a first-rate glass, made her out to be a French merchant ship, homeward bound, in all probability from the Mauritius, or Isle of France, as it was then called, which at that time was under the French flag. To carry out

* The English gained possession of it in 1794.

my preconcerted plan, for which this seemed a favourable opportunity, I hoisted the British ensign. Soon the stranger answered with her flag. Directly the tricolour fluttered up to her mizen peak I gave orders to put the helm hard up, and square away the yards. I intended to make a feint of running away, and as we were close-hauled to the wind, this evolution was necessary. All hands were amazed at the order, and some doubtless thought, to judge by their astonished looks, that the skipper was gone mad, but, nevertheless, they obeyed with alacrity. The manœuvre had the desired effect. The enemy, after standing on a little, changed his course the necessary number of points for chasing. I rubbed my hands with glee, and, descending to the deck, ordered the men to their quarters for action. The Jacks now understood what was my object in running away from the Frenchman, and, with the greatest good humour, fell into their stations. The guns had been secured inboard, for, not being considered of any use in our present crippled state, they had been run in. They were now cast loose, the magazines opened, and everything prepared, so that at a signal the gun-ports could be opened, and the enemy favoured with a taste of our mettle. On came Johnny Crapaud, doubtless thinking it fine fun to turn bully and seize a small barque of "perfide Albion." That morning, and every morning, he, the said Johnny, was only thinking how best to evade the omnipresent and invincible cruisers of the British Navy, and now, *coute qui coute*, he was driven almost to chase, and, aha! capture the miserable dismasted Englishman fleeing from his wrath.

The stranger of course overhauled us; so, to keep up the delusion, we doubled like a hare, and, "hauling our wind," steered "full and bye." Doubtless revelling in this new sense of glory—we all know Frenchmen will die for *la gloire*,—he speedily followed suit, like a keen hound, to continue the simile of the chase. Our seamen lay down at their quarters, quite concealed by the bulwarks, chuckling inwardly and uttering jokes audibly, as they watched the Frenchman fall into the trap laid for him. A fine fat prize he would prove to be was the unanimous verdict, as we marked how deeply the barque was laden.

I walked about the poop; my first lieutenant, Mr. Buckle, taking charge of the gun's crews on the quarter deck, the second lieutenant having command of the foremost battery. "On a wind" was the *Red Hawk's* best sailing point, and I was surprised at the good fight she made of it, notwithstanding her jury rig.

The Frenchman still overhauled us, and soon she was something less than a quarter of a mile distant, when she actually had the impudence to fire a shot at us. The pop-gun—it must have been a three-pounder

—was discharged at the Letter of Marque, and though, from the short distance, one would have thought it was something like firing at a haystack, the projectile ricochetted in the water nearly a quarter of a mile on the starboard side. A chorus of derisive laughter—"promptly suppressed," as the penny-a-liners of the police-courts say—greeted this wonderful practice, and our fellows peered through chinks in the ports to watch the gunners on the ship's forecastle as they, with much difficulty, reloaded their formidable piece of artillery for a second discharge. But we had had enough of it, and it suited our purpose to be thoroughly frightened into submission. I determined to spare all further effusion of powder and shot; and so, lowering my topsails and hauling down the ensign, I "brought to" as submissively as could be desired. Still my brave fellows kept under cover, though they had hard work to restrain their eagerness to throw off the disguise and let the Frenchman into the secret. The merchantman now lowered a boat, and half a dozen sons of Gaul stepped into it blithely, and pulled off to their prize. They were soon alongside; a rope's end or two were flung to them as they prepared to ascend. With characteristic volubility, the officer in the sternsheets, directly he came near enough to be heard, informed us that he had come to take possession of "zee Inglish sip"—he evidently prided himself on his knowledge of our mother tongue. The crew, all in boisterous mirth, also jabbered away like so many monkeys. Up the side, and followed by all his crew with the nimbleness of the animals aforesaid, the mate made his way, and, jumping off the top of the rail, was soon standing on deck. He screamed out as his eyes rested for the first time on the long row of shining, well-kept 18-pounders; but before he had time to say more, a dozen of my men surrounded him at a signal from me, and many hands were laid on himself and the whole of his crew.

It was a study to watch this man's face as it changed colour from the rosy tinge of health and happiness to the ashen hue of fear and despair. He was our prisoner, and I told him so; I then asked him in English what situation he held on board the Frenchman, but he had forgotten his English now, and shrugged his shoulders to imply he did not understand; he moreover threw quick glances over the bulwarks towards his ship, as if meditating an attempt at escape. I mentally took the measure of this man's character, and, coupling his previous swagger with his present sulkiness, put him down as a coward who could be frightened into anything. I asked him now to order or request the captain of the Frenchman to lower his topsails, for you see, though she was near us, I was afraid that at any moment her commander might, what is called

in the colloquial, "smell a rat," and then she could sail off with impunity, or perhaps, if we opened fire upon her, with the loss of only a few spars,—for we could not chase.

The second mate, for such he was, flatly refused to do as I desired; upon which I pulled a pistol out of my pocket—it was capped, not loaded,—and fired it in his face. Of course the cap only exploded, upon which I flung it down, and drew another with an expression of impatience. I had no need to do anything more, for the miserable braggart flung himself down on his knees, and, imploring me to spare his life, swore in broken English, which sounded oddly enough, to do whatever I ordered him. Holding the pistol still aimed at his head, I directed him to mount upon one of the carronades and shout to the captain of the Frenchman to lower his topsails; this he did at once, and in a minute we had the satisfaction of seeing the heavy topsail yards go creaking down the masts until they rested on the caps. Now she was ours.

I lowered a boat, and directed my second lieutenant to go on board with an armed crew and take possession. As soon as he had pushed off, and was within a few yards of the barque, I opened all my gun ports and ran the guns out, at the same time ordering the French officer, still with the pistol at his head, to warn his countryman not to resist, as we were an English privateer, and I would blow her out of the water if any opposition was made to my seizing her. All this he did with the most commendable obedience. To enforce my threat I fired a blank cartridge at her; but no further demonstration of the warlike character of the *Red Hawk* than a display of her guns was necessary, for after a few moments' consideration, and, I suppose, a fair amount of swearing, the skipper betokened his having surrendered at discretion by hauling down his jaunty tricolour.

No opposition was offered to the boat's crew, and in a few minutes the flag of Old England was hoisted at the mizen peak, thereby denoting that *La Fraternité* was our prize. A crew was sent on board to navigate her to Bombay, with directions to make the best of the passage and await my arrival there, and the first lieutenant went in *La Fraternité* as her acting captain.

I took on board my ship all the French sailors, and also a quantity of spare masts and other spars, so as to fit the *Red Hawk* with a better jury rig, and then we parted company. I forgot to mention that the prize's cargo was a very valuable one, consisting partly of a large quantity of bales of the most valuable Chinese silks, which she had transhipped from Mauritius, and she had also filled up with rice and

spices ; so that altogether the ship and cargo, we calculated, were worth some £60,000.

For some days after this interesting event nothing occurred worth chronicling ; but on looking over my note-book I find that on that day week, when, indeed, we were nearing the coast of India, there is an entry of a circumstance which will be perhaps thought of sufficient interest to merit recording.

One morning an officer reported to me that one of the seamen had been found in a state of intoxication in the spirit-room, which, in the *Red Hawk*, was constructed in that part called the ship's "run." By some means he had managed to get unperceived below hatches and had forced the lock of the storeroom ; then, creeping along on his belly, he had got to work at one of the casks, and, having possessed himself of a gimblet, wherewith to make a hole, and a straw to insert into the hole when pierced, he had made himself perfectly comfortable until discovered in a state of beastly inebriation. The fellow (his name was Watkins) was brought up on deck and placed in confinement on the quarter deck with a sentry over him. I decided to flog him as soon as he recovered his senses. On the following day he awoke from his drunken sleep, and, on discovering his position, seemed greatly surprised. Food was offered him, which he refused, though he drank water freely. As the day advanced he evidently by some means gathered what was in store for him—in all probability he saw the sailmaker employed at making a new green baize bag in which to keep the dreaded cat-o'-nine-tails. However that may be, Watkins became very morose, and sat on the deck with downcast eyes and muttering to himself. His conduct at length became so strange that my attention was directed to him, and I sent for the doctor and requested him to examine the culprit. He did so, and informed me that he thought the man was shamming, as there were no indications of insanity in his mental condition.

Accordingly, acting upon the doctor's report, I sent for Watkins and informed him that this attempt to play the madman and impose upon me would not have the result he expected, and that I intended flogging him on the following morning for his gross breach of discipline. He did not say a word, but the strange altered look in his eyes made me feel uneasy, and I mentally resolved that if this peculiar expression, which I was satisfied was caused by incipient insanity, did not pass away by the time fixed for the infliction of the cat, I would remit the punishment and place him under restraint.

Unfortunately I did not act upon my resolve earlier. About the middle watch all was quiet as death on board ; not a voice was heard

except the whispered converse of the watch on deck, as they crouched or lay about the decks awake and ready for a call to trim sails, or what not. Not a footfall broke the stillness except the light tread of the quartermaster as, to keep himself awake, he paced before the binnacle, upon which he kept his vigilant eye, and the measured tread of the sentry on the quarter deck.

That is a delightful hour at sea in the tropical latitudes, and now, when after the heat of the day there was a pleasant breeze fanning one's cheeks and causing the light waves to chase and tumble over each other with that musical gushing sound so pleasant to the ear, it was doubly grateful. I was restless that night, and, after reading for some time and inhaling the fresh air on deck, was sitting at the large open gun port thoroughly enjoying the calm beauty and quiet of the scene, when suddenly I heard a quick pace overhead as of a man running. I had just time to start up and make towards the companion ladder that led to the deck, when I heard a splash and then a loud shout, "Man overboard!" "Man overboard!" I had instinctively guessed what it *would be* when the hurried tread over my head caught my ear, and what it *was* as I heard the splash. I reached the deck in two bounds. There a little way astern I could see the form of a man; for an instant, as the light from the stern ports fell upon his pale agitated face, I recognized the man Watkins. But it was only for a fleeting moment, for, uttering a wild scream, he threw his arms frantically above his head, and disappeared beneath the dark waters that were dancing so merrily and yet so treacherously beneath the moon's pale light, and which but the moment before, as they swept tunefully along under my window, I was thinking looked as if never more would they in their wrath flow over mighty wrecks or hide in their fathomless embrace the sorrow and guilt of numberless sons and daughters of our race.

The ship was quickly hove to, a boat was lowered, and every search made for the unhappy man; but it was in vain, and I knew it would be futile, for the momentary glance I caught at the features of the wretched suicide convinced me that he was also a lunatic.

After this event nothing occurred of great importance. We arrived at Bombay in safety, and considered ourselves very lucky in escaping not only from the perils of the sea, but from the cruisers of the enemy, which at that time committed great depredations on British commerce, issuing, as they did, from the Isle of France.

At Bombay we found our prize, which had arrived some ten days before us. I immediately sold her cargo, and then tried to dispose of the ship; after some trouble I sold her to a firm trading with Singapore,

for a handsome sum of money. The sailors received, each man, the share of prize-money for which they had signed articles on joining, and, though every one pocketed a considerable sum, they got through it all with the alacrity and folly so characteristic of the British sailor. I gave them plenty of leave on shore to spend it while the *Red Hawk* was in dock; and then as soon as they had no more rupees they were glad to "turn to" again, and rig the bark anew from truck to keelson. A better and finer set of men I never sailed with; I scarcely ever had occasion to use the cat, preferring always to discharge the delinquent, and I never had any difficulty in securing plenty of men.

There is never any difficulty in picking up plenty of good men at Bombay, for Jack always arrives there after having experienced the unpleasant restraints of a long sea voyage from England. His advance of wages is quickly gone in carousing on shore; probably he gets "in tow" of some undesirable person, and, being anxious for two or three days' more "liberty" on shore, as he calls it, is quite prepared to barter his liberty for three or four years, or during the remainder of the man-of-war's commission, for a little ready money. This he can do by at once offering himself on board, but, if he is too indolent, there are plenty of "crimps" on shore who will induce him to take the bounty of £5 for a particular ship, thereby securing for themselves the head-money of £1. Jack, indeed, is unfortunate in the possession of numerous friends all over the world, who look after the honest fellow, and fleece him.

Being short of a few hands, I sent my gunner with instructions to pick up a dozen of as good seamen as he could muster, giving the preference to men-o'-war's men. The old warrant officer returned with a baker's dozen—fine stalwart fellows they were as ever drew a cutlass—and goodness knows, and so will the reader soon, that they were required before long to save the *Red Hawk* from dishonour, if not from capture. But I am anticipating.

(*To be continued.*)

"Fishing for Cats."

I AM a bit of a naturalist, and I like to study English natural history above all other. And I think, without egotism, I may flatter myself that I have picked up a good deal by the aid of my eyes and observation—as much as perhaps by my longing for out-of-door life, and my assiduity and perseverance in prying into the secrets of nature. Having always been "a raw country lad," as I have been called before now, it was one of my greatest treats to be allowed to have a day to myself; that is, I was allowed to start when I liked, go where I pleased, and come back at any hour before ten that suited me best. These days were red-letter days in my holidays, and were looked forward to with a feeling somewhat approaching a milder form of lunacy. It is one of these days that I am now going to describe.

With my satchel on my back, and my blackthorn in my hand, and accompanied by my dog Gyp, a half-bred spaniel, I sallied out one morning at five o'clock on one of these rambles. It was rather earlier than usual, but I had a long way to go, for I always had a settled destination before I started, and we were now bound for Crackthorpe Wood, a distance of about eleven miles. I was rather misanthropical in these long walks, and besides Gyp I never had a companion.

The morning gave fair promise of a hot day, and I wished to get under the leafy shade of Crackthorpe before it was unpleasantly warm. My commission on these days took a very wide range, and embraced prizes from an owl to a field mouse, and included the whole realm of nature, birds, beasts, fishes, reptiles, and insects. As Gyp and I strolled

along, my companion started a hare, and would have given chase, but I, knowing the illegality of the act, and the comparative uselessness of the prize to me, called him back. But it was no mercy to the hare, for a moment after I perceived a stoat chasing it. The hare who had hitherto run bravely, directly it was aware of its new pursuer, seemed to lose all its energy, and hopped along as though suddenly benumbed. Of course the stoat captured its prey with ease then.

But the little conqueror, I perceived, had not strength enough to drag its prey away; consequently I was able to examine it when I came near. I found that it had been dispatched by a sharp bite in the neck, scarcely perceptible but for the trickling of the blood. Leaving the carcase to the lawful owner, Gyp and I went on, now along dusty lanes, now in the green fields, and ever and anon finding something to attract us. Gyp would startle a hen partridge or a landrail, who, with its "crake, crake," would run a short distance and then fly, leaving its invader in "deep despair and anger mute;" and he would return to me with his tongue lolling out and his tail limp, really crestfallen, as though conscious of defeat. But it was not always that he returned vanquished, for once, when out on one of these periodical rambles, I missed him for some hours, and when I set eyes on him again, he was lying, apparently exhausted, by the road-side. Upon closer inspection, I found that he had been making a dainty dish of a litter of young leverets, a portion of the last one lying by his side. The brute had so gorged himself, that it was with the utmost difficulty I could manage to get him home. After a slight refresher and a drink of milk at a farm-house with the owner of which I was acquainted, I was about proceeding on my way, when he inquired my business. I told him pleasure was the order of the day: he instantly retorted, "My lad, make it business. I tell ye what—if ye catch me the darned polecat in Crackthorpe yonder, I'll gie ye ten shillings, that I will. I've lost 'leven o' my best Dorkings." And he then went into a long tale of his losses in his fowls, geese, &c., with which I will not trouble you. He furnished me with a couple of steel gins, some raw flesh, rope, and a young bull-terrier, a friend of mine. With these I set off, having the prospect of earning a gold half-sovereign. I must confess that my chance of earning it appeared very slight, inasmuch as the only polecat I had seen was one nailed outside the lodge of Lord Strasberry's gamekeeper. And my knowledge of entrapping the said animal was slighter still; but, having read that necessity is the mother of invention, I set to work to discover a method, and I alighted upon one, as will be presently related, which I must say was highly creditable to an embryo trapper, and, although perhaps it was a novel

one, it resulted in the capture and death of the game I was in pursuit of.

Arrived at Crackthorpe, I set to work to make my preparations. I baited my gins with the flesh I had procured from the farmer, and then sat down for a rest in sight of my traps. I found waiting a weary task, and would fain have gone for a stroll, but my anxiety on the one hand, and my pride on the other, deterred me; so I felt in my satchel, and bethought myself of a somewhat greasy and well-thumbed volume of Scott's "Marmion." I fetched it out, and was soon immersed in the adventures of that chivalrous but dissolute knight. After an hour or so I began to feel tired of reading, and, restraining my impatience no longer, I left my traps to take care of themselves, and started off. The strange dog, Turk, was a sad bother to me; unlike my Gyp, whom I had trained to follow close at my heels, he was all over the place, and I was sorely tempted to pitch him into the next pond I came to, or else tie him to a tree, a plan to which I had recourse later on. Pursuing my intention of prize-taking, I rambled the woods through, and rapidly loaded myself with curiosities. I made a rare feast on hazel-nuts, blackberries, and wild crabs, a triumvirate with which every schoolboy is acquainted; and during my ramble I discovered that woodcocks usually sleep in the day-time, and towards evening they all turn out, like a herd of boys all merry with glee and joviality. As usually happens with boys, I fell upon game preserves; and, as another illustration of "stolen fruits sweetest," I made no hesitation of clambering the fence. Turk, of whose rebellious proclivities I have before spoken, I took the precaution to fasten to a tree, but Gyp I allowed to follow. It was a mere repetition of what I had seen in the wood, except that we startled pheasants by the score. But there was one circumstance connected with it; we saw in the distance a band of men engaged in that brutal foreign importation, the battue.

The presence of keepers, too, reminded me that I had better depart, so I made the best of my way out. Arrived at my traps I discovered "no effects." I began to despair then, and my half-sov. seemed to fade like a mirage, but my hopes were resuscitated by an idea that suddenly entered my mind. I returned to the farm-house, and begged an old hen from my friend, and also some stout twine. Returned to the woods, I clipped the fowl's wings, and tied the string to her leg, and then turned her adrift. I was now what may literally be called fishing for polecats. My bait hopped along an avenue between the trees, first on this side, then on that, and she would sit down until I woke her up with a sharp tug. She seemed quite unconscious of the purpose she was being put to, and

only resented the indignity of having her wings clipped by a loud cackling. This suited my plan very well. My dogs whom I had in leash, as it were, were astonished at the new mode of procedure, and followed me very docilely. I kept this game on for an hour and a half, and towards six o'clock I commenced to tire of this also, but remembering it was my last card, I resolved to play time out. My bait was now about fifty or sixty yards in front of me, and I was concealed by a tree. The old hen was cackling like mad from the effects of a more than usually severe tug, when she suddenly ceased. My eyes naturally looked for the cause. My ruse had succeeded thus far, for the polecat had pounced upon the bait. My next thought was to let loose the dogs. Away they flew toward the captor, who stood erect showing its canine-like teeth, and growling; evidently it had no intention of relinquishing its prey. The dogs, too, were not slow in comprehending their mission. Turk, more zealous than prudent, made a dash, but found to his cost that he had no mean opponent. Gyp, profiting by the occasion, then closed, and between the two the cat was killed, but still holding his prey.

I was not a little elated at the success of my plan, and walked back for my reward, but to the eternal shame of the old nip-pinch, he wanted to charge me eighteen-pence for the old hen. This I would not agree to, and after a strenuous opposition on my part, I obtained the full amount, and a ride home into the bargain.

The Art of Making Fireworks.

By CHARLES W. QUIN.

THE pretty little catherine-wheel, or pin-wheel, is so well known to every boy who has laid out a shilling on fireworks that it will not be necessary to describe it very fully.

The cases for pin-wheels are made on long wires, a quarter or 3-16ths of an inch in diameter. The paper should be of very good quality, and as little paste as possible should be used. Not more than six turns should be given, otherwise the case will be too thick to go easily round the wooden centre. They are filled with the funnel and wire, the ends being simply pinched and tied. When complete, lay the cases on a table, and smooth them down gently with a paper knife. This will tend to equalize the hardness of the composition, besides slightly flattening them. You must provide a number of small discs of wood, with a pinhole in the centre to wrap them round. Fasten the end to the wooden disc with a drop of sealing-wax, and gradually coax the case into a flat spiral form. If you have driven your composition too hard, you will find that you cannot do this without breaking the case. When the operation is completed, paste two narrow strips of thin blue paper round the wheel, at right angles to each other ; prime with meal-powder, and close by twisting the end of the case with your finger and thumb. The compositions for pin-wheels are almost endless. The following is a good selection from English, French, and German sources :—

Nos. 1, 2, 3, 4, 5, 6, 7, 8, and 9.

Meal Powder	3	0	8	16	9	0	0	0	0
Nitrate of Lead	1	12	0	0	0	0	0	0	0
Nitre	0	2	0	0	4	0	0	0	0
Sulphur	0	0	0	0	1	0	9	1	1
Charcoal	0	3	1	0	0	2	0	0	0
Steel Filings	0	3	1	0	0	0	0	0	0
Litharge	0	0	0	1	0	0	0	0	0
Nitrate of Strontia	0	0	0	0	0	3	0	0	0
Chlorate of Potash	0	0	0	0	0	10	24	70	4
Chloride of Lead	0	0	0	0	0	0	2	20	0
Oxychloride of Copper...	0	0	0	0	0	0	6	0	0
Nitrate of Baryta	0	0	0	0	0	0	0	75	0
Shellac.....	0	0	0	0	0	0	0	20	0
Bicarbonate of Soda ...	0	0	0	0	0	0	0	0	2

Of these, Nos. 1, 2, and 3 are brilliant fires with white sparks; No. 4 gives red sparks; No. 5 is a white fire with sparks; and Nos. 6, 7, 8, and 9 are red, blue, green, and yellow fires respectively. A number of wheels of different kinds, arranged in triangles, hexagons, quincunxes, &c., give an excellent effect, especially where the innermost ones are made with coloured fires and the outer ones with sparks. In such cases they must, of course, be united with a quick-match, so that they may be all set on fire together.

Gerbes are long stout cases filled with brilliant fire giving a shower of sparks. They are called *gerbes* from a French word, signifying a wheat-sheaf.

They may be made of any diameter from half an inch to 2 inches. The inch size is a good one for ordinary purposes. It should be made of two sheets of pasteboard, and when finished should be nearly a quarter of an inch thick. The number of turns can be ascertained by experiment, it being almost impossible to give an absolute rule, as pasteboard of the size mentioned frequently varies in thickness. The case, which may be 12 inches long, is open-choked and tamped. It is then filled with one of the following compositions, driven pretty hard to within an inch of the end; half an inch of clay is then rammed in, and the end turned over on to the clay. The case is then reversed, and a hole bored with a *brass* bradawl, made of a piece of brass wire inserted in a handle, through the choke and clay into the composition, a piece of quick-match inserted, and the whole capped neatly with touchpaper. The aperture at the choke should be at least one-third of an inch in diameter. If Chinese fire be

used, it must be enlarged to at least half an inch, otherwise the case will burst.

Brilliant fire for Gerbes, Nos. 1, 2, and 3.

Meal Powder	6	16	16 parts.
Nitre	2	1	4 „
Sulphur	2	1	2 „
Steel Filings	2	0	2 „
Cast-iron Borings	0	8	0 „
Charcoal	0	0	2 „

Chinese fire for Gerbes, Nos. 1 and 2.

Meal Powder	12	0 parts.
Nitre	16	16 „
Charcoal	7	4 „
Sulphur	0	3 „
Iron Sand	11	7 „

Iron sand is made by melting an ounce of sulphur in a pipkin, and adding to it an ounce of steel filings. The resulting compound is pounded somewhat coarsely.

When made with care, gerbes are very beautiful fireworks. The great difficulty, however, is to adapt the size of the open-choke to the strength of the composition. If it is too small, the case will burst; if too large, it will burn irregularly.

It will be seen that all the compositions for gerbes contain either iron or steel filings, or iron sand; they should therefore be only mixed a day or two before they are wanted, otherwise the metallic particles will become rusty, on account of the other ingredients, more especially the charcoal, attracting moisture from the air, a state of things that will greatly detract from the brilliancy of this kind of firework.

It may be here remarked that steel and iron filings, cast-iron borings, and iron sand should be kept in a warm dry place, but, as this is not always possible, the following method of preserving them in a state of purity, recommended by M. Tessier, an eminent French pyrotechnist, may be adopted with advantage.

Throw into a pipkin ten parts of the substance to be preserved, and pour over it one part of *unboiled* linseed oil. Place the whole over a quick fire, and stir well with an old knife or a piece of stick, so that the oil may mix thoroughly with the metallic particles. As the heat rises the mixture begins to give off a thick vapour, and the filings become brown, and lastly black. The stirring must now be kept up

briskly, to prevent any tendency towards caking together, until the smoky vapour has just disappeared. If the operation has been successful, the filings will be quite black and covered with a shining coating of varnish. No matter how much care you may exercise, you will always find that some of the material will cake together. Such pieces should of course be sifted out and thrown away. It is hardly necessary to say that the prepared filings should not be sticky or greasy in the slightest degree, otherwise the operation will do more harm than good; but, in any case, it must be remembered that fresh bright unprepared filings are always better than any others.

Gerbes, filled either with Chinese or brilliant fire, may be used in combination with excellent effect. The Prince of Wales's feather is a well-known example of this. It is formed, of course, of three cases, connected with quick-match, so that they may all ignite together, the two outer ones being fixed at a slight inclination outwards. Five, six, or seven may be arranged in the form of a star or tree. And here a word may be said about the importance of sparing no pains in making your quick-match or in uniting it to the different cases after it is made. A five-pointed star, for instance, only three of whose cases had ignited through being badly primed or connected, would form a rather ridiculous exhibition.

The next kind of firework we shall describe is the Mine.

The mine, as its name would lead one to suppose, is a firework in which a number of crackers or reports are thrown up into the air by the force of a charge of gunpowder. The cases for mines, like those for Roman candles, must be of great strength and thickness, for they act the part of a piece of ordnance, the ball in this case being the crackers or serpents. It will first be necessary to provide about two dozen crackers or serpents. The former should be of the smallest size, let us say with not more than eight reports, the latter not longer than two and a half or three inches. The cases for mines may be made of almost any size—from three inches in diameter and seven inches long, upwards. The height of the cases for mines should always be about two and a half times their diameter.

A very good size is that measuring three inches by seven. It may be made of brown paper and pasteboard, taking care to use plenty of paste. Its thickness should be such that it cannot be bent by the fingers without exercising an unusual amount of strength. The brown paper should be eight inches and a half long, and should not be applied to the pasteboard cases until it is perfectly dry. A piece of wood, at east three-quarters of an inch thick, or several layers of thick pasteboard,

should then be fitted into the bottom, the extra inch and a half of brown paper being snipped, pasted, or, better still, glued and turned over. Don't be afraid of making your case too thick; the great danger is that it will be too thin. If you can manage to find a tin canister of the size above mentioned it will serve your purpose better than the pasteboard case; but most of the canisters in ordinary use are too short for the purpose.

Being perfectly sure of the thorough dryness and strength of your case and of the efficiency of your serpents or crackers, you must next proceed to form your charge. The strength of this will of course depend upon the height to which you require your serpents to be sent. A three-inch case will require about an ounce of ordinary sporting corn-powder. It should be placed in the middle of a square of thin strong tissue paper, the edges of the paper being gathered up and tied something like a pudding in a cloth, the object being to make a round flat pad of the same diameter as the case. Some authorities recommend a layer of meal powder a quarter of an inch thick, and well rammed down; but the paper packet of corn-powder is just as effective, and is much more easily inserted. Having dropped the bag of powder to the bottom of the case, it must be smoothed down with a former, so as to make it as flat as possible. It should then be well dusted over with meal-powder, a piece of thin paper well smeared with meal-powder on both sides being pressed down upon it. Through a hole in the centre of the thin paper a long piece of quick-match, with, say, an inch of its lower end exposed, should be inserted, and the case filled up with serpents placed mouth downwards. The mouth of every serpent *must* touch the paper, otherwise it will be blown out of the mine without being ignited. Care must be taken that the position of the quick-match in the middle should be preserved. A case of three inches in diameter will contain about two dozen serpents of the size we have mentioned. They should be packed quite loosely in the case, so that the charge of powder which is to launch them into the air may meet with as little resistance as possible. It is not a bad plan to tie the quick-match lightly to the centre serpent. If crackers are used the case need not, of course, be so tall as the one we have mentioned. The operations to be gone through are otherwise precisely similar, but perhaps the best way, after all, is to make the serpents with a report at the end, so as to have a combination of serpent and cracker.

We now come to the case or fountain which is to play before the mine is exploded. This may be an inch or three-quarters in diameter, its length about six or seven inches. A thick case filled with ordinary

serpent composition, or one of the following, answers admirably; but here again personal taste must be exercised.

Compositions for cases Nos. 1, 2, and 3.

Meal Powder	16	.....	4	.....	0	parts.
Nitre	6	.....	16	.....	10	„
Sulphur	3	.....	8	.....	4	„
Fine Charcoal	3	.....	0	.....	0	„
Lampblack	0	.....	0	.....	3	„

Having choked and primed your fountain, cut a piece of pasteboard to the size of your mine, with a hole in the centre, of the diameter of your fountain. Fasten this disc into the top of the mine with some slips of thin paper, taking care that the quick-match communicating with the serpents and charge passes through a hole bored in the bottom of the fountain. Push the fountain through the disc so that it rests gently on the top of the packet of serpents, and paste the whole together lightly but securely with several pieces of thin paper. You will now have a fountain of fire resting on the packet of serpents or crackers and communicating with the charge which is to ignite them, and blow them into the air by a quick-match. It should be mentioned that the quick-match used for the above and similar purposes is always inclosed in cartridge-paper tubes made on wires, one-third larger in diameter than the match itself. It is supposed to be an improvement to prime the serpents and crackers to be used in mines with bare quick-match instead of ordinary touchpaper. When a mine is filled with crackers instead of serpents, the mouths of these must be carefully connected with bare quick-match, so that they all ignite at once. It is best, too, to arrange them one upon the other in fours with all their mouths together, so as to save your quick-match. They may be tied together with cotton before inserting them in their place, but the cotton must, of course, be cut before the mine is closed, so that they may all be separated when blown into the air.

The following method of making quick-match is employed by one of our first manufacturers of fireworks. Take two ordinary balls of lamp-cotton, which are generally wound in two strands, and wind them off into a ball of four strands. Next soak 2 ounces of the best gum arabic in cold water for 12 hours, and then boil it with three-quarters of a pint of water. Strain the gum-water through fine muslin, so as to get rid of any grit that may be present, and soak in it 12 ounces of good corn-powder, blending the whole well together with a wooden spatula until it is of the consistency of a thin paste. Next lay in the cotton, coiling it

round in such a way that it may be well soaked and easily withdrawn without danger of entanglement. Let the whole remain for three hours, wind off the quick-match on to a suitable frame, and allow the whole to dry in the open air. The frame for this purpose may be made of thin laths. Too much cotton must not be immersed in the paste at once, otherwise the resulting quick-match will not be sufficiently covered. When perfectly dry, sift it over with fine meal-powder and inclose in cartridge-paper tubes as before directed, joining them together when necessary.

In our first article we gave the method of making those pretty little fireworks known as lances. We will now give directions for forming them into various devices, wreaths, letters, &c. Having decided upon a design, sketch it carefully upon a piece of thin tin-plate. Let us suppose, for instance, that your design is a star of five points measuring 12 inches in diameter (it can hardly be made smaller with good effect): bore holes in the plate about an inch or an inch and a quarter apart, with a sharp pointed bradawl, following your design as closely as possible. If your design is not very complicated you may use simple strips of tin instead of one large plate. Having bored your holes as equidistant as you can, insert in each a *sharp-pointed* iron tack, turn the tin plate over, and nail it to a board so that the points of the tacks are standing outwards, being, of course, prevented from falling through by the board behind. Paint the whole with a mixture of lampblack and size, and allow it to dry in the sun. The lances are pressed on the sharp points of the tacks carefully, with their mouths facing outwards. They are then connected with a quick-match, so that they may all ignite at once. In this way innumerable designs of great beauty may be easily formed, different colours being chosen for each design. In order to prevent accidents, it is as well to bore a small hole in the bottom of each lance before fitting it on the point of the tack.

For firing fixed and revolving pieces it is necessary to use portfires. These are thin cases filled with a slow-burning composition. These cases are made from ordinary 18lb. demy paper, and are rolled on formers a quarter of an inch in diameter. They are generally from 2 to 8 inches long, pinched close at one end, and left open at the other. Their length is of course regulated by the number of pieces you wish to light with them. They are filled by means of the funnel and wire, and are crammed with moderate hardness. When charged, leave an eighth of an inch at the top to receive the priming, which is made of ordinary gunpowder mixed into a paste with water. Either of the following compositions may be used :—

Compositions for portfires Nos. 1, 2, and 3 :—

Nitre	6	12	16
Sulphur	2	4	8
Meal Powder	0	2	0
Fine Charcoal	0	0	3

The first of these compositions is that used by the Government.

Coloured Fires for Indoor Use.—Most of the coloured fires for which directions were given in our second article are quite unfit for theatrical purposes, or for burning in confined situations, owing to their containing sulphur or some other substances giving off deleterious fumes when burnt. Displays of coloured fires at private theatricals are now so common that it will be as well to give a few hints on this subject. The following compositions are wholly free from the defect just mentioned, and may be burnt with perfect safety even in a small room. They may be burnt in pill-boxes like Bengal lights.

	Chlor. of Potash.	Nit. of Potash.	Nit. of Baryta.	Nit. of Strontia.	Bicarbt. of Soda.	Sugar of Milk.	Shellac.
White	12	4	1	0	0	4	1
Yellow	6	6	0	0	5	0	3
Green.....	2	0	1	0	0	1	0
Red	12	4	0	6	0	4	0

Excellent effects may also be obtained by burning alcohol over a piece of cotton wick which has been soaked in a solution of one of the following substances, and then dried :—

YELLOW..... Nitrate of soda.
RED ..... Chloride of strontium.
GREEN ..... Nitrate of copper and boracic acid.
BLUE ..... A little pure nitrate of potash.

My First Appearance in Print.

WE had settled down into our usual routine at College House, and were in the middle of the third quarter's work, when the long-looked-for day, appointed for our match with Johnson's boys, arrived.

There were two schools in Chicklehurst, our own and Johnson's; and, like many others where there are two in one town, we disliked each other cordially, and were as jealous as we possibly could be. I cannot tell the reason why such feeling should exist. Dr. Johnson and Mr. White, our master, were as neighbourly and affable one towards the other as any one could wish, and certainly we boys did not derive the ill-feeling from them; the only reason I could ever suggest was, that the ill-feeling was hereditary, and directly any boy entered either school he was inoculated with the virus.

It was the match of the season, not only because of the spirit with which it was played, but in consequence of the interest with which it was regarded by the inhabitants of Chicklehurst and the neighbourhood. The *Chronicle* and the *Gazette*, our two local papers, criticised the practice of the respective parties, and praised or censured the style of the players. It was a great day for us. For weeks we practised with an assiduity and perseverance which, if applied to Virgil and Telemaque, would have made us masters over and over again of those interesting authors. Bradley, our "mentor" and ground-keeper, had repeatedly assured us that we could not lose; and so certain was he of our success that—as he afterwards informed me—he had staked his next month's wages upon that event, and I am sorry to say that several of our boys did the same thing with their pocket-money.

The match-day opened with a shower, and the majority of the eleven thought they would have a wet day's work, but after breakfast the sun shone out splendidly; thanks to our proverbially changeful climate. Some wag, with more zeal than wit, had pasted placards about the schoolroom, bearing the words "College House expects this day each man to do his duty."

The match was to commence at eleven o'clock, and as the time drew near, I being a newly-elected member of the eleven, and it being my first match, became very nervous to think that I should retire with a "duck's egg" prefixed to my name, and especially so when I perceived, amongst the company, my mamma and sisters. Punctual to the minute the match was commenced by Johnson's eleven, who, having won the toss, sent two men to the wickets. The first wicket fell for seven, and the second for thirteen. This was satisfactory as far as it went, but we had not yet disposed of any player of note. The captain, Wilson, then came in. He was a tall, well-made fellow, not burdened with too much fat, but with a muscle fit to knock a bullock down. Steadily and warily he played the first over, and he was wise enough not to let his anxiety to run up a long score overcome his prudence. Our bowler, Russell, was one of the best I have ever seen, but he could do nothing with him. Gradually he became bold, and the ball went flying about in all directions. Round-arm, "slows," "twisters," "bailers," all were the same to him. The score ran up wonderfully, and we could not get him out. We occasionally got a man out at the other end, and by the time the sixth wicket fell the telegraph announced "runs scored 112, last man fourteen." The seventh man in was a fellow named Stubbs, who had played against us for the last three years, and had carried his bat out each time. He was anything but a brilliant player, and he only gained admittance into his eleven by his inveterate habit of blocking. I was assured that during the three years he played in our annual match he had only made seven runs. Now, with these two men in, the Johnsonites calculated to make a stand. And they had not reckoned without their host, for over an hour did these two men tantalize us, defying every attempt on our part to separate them. Cheers resounded from all parts of the field at every run made. Slowly, but surely, the telegraph announced 130, 140, 150, 160, and our case was getting desperate. Wilson was now as bold as a lion, swiping at every ball, regardless of the risk he ran. Several times he was cautioned by his partisans, until after a desperate lunge he was startled with a "row in his timber yard." "How's that, umpire?" "Out, sir;" and the redoubtable captain had to retire stumped, having scored sixty-two to his own bat.

Never was a man more heartily cheered. Everyone offered him something to drink. Evidently Johnson's boys thought that the game was their own. From the moment Wilson was out we went on smoothly, and in half an hour we had put out his eleven for 182. Luncheon followed, and we, on our side, were advised by our umpire, Bradley, to abstain till supper, or at least till after the match.

"Play" again called, we commenced our innings. Very bad indeed was our beginning. First wicket fell for 8, and the second for 11. Then we made a stand, so much so, that when the third wicket fell, we had run up a score of 53. But we were not out yet. Our "crack" had vowed he would give them a turn at "leather hunting." He opened their eyes a bit when by a magnificent cut to leg he made four, and the succeeding ball he cut for two. After this display they thought fit to change their fast bowler, for whom they put on a slow. This was a most beneficial change, and one that answered in all respects. Our "crack" lost his head and his wicket in his anxiety to lessen the runs between us, by the agency of these slows. The next and the next suffered the same fate, and then I had my turn at the "willow."

Profiting by the example made of my predecessors, I wisely determined to leave the slows alone. The score then stood at 78, and after making 14 I was had amongst the slips. Play went on very slowly; now and then there was a hit, but nothing of consequence, and we were all disposed of for 133, being 49 in a minority.

Naturally every one regarded the game as a foregone conclusion for the doctor's boys, and our eleven were being taunted and verbally ill-treated, when "Play" was called, and we rushed to take our places. Then followed what our "sporting press" denominate "the glorious uncertainty of cricket." The formidable captain and the invulnerable Stubbs opened the batting. The captain was disposed of for two, in the second over, and when in the next ball Stubbs was caught at point, there arose a mingled yell of delight and despair, enlivened by a kind of war dance. The game wagged merrily at least for us, four wickets down for 15 including extras was not an insuperable barrier to our winning. Albeit we had yet some difficult customers to deal with, but we "polished" them off beautifully.

Fortune smiled upon us now, and one after another beat an ignoble retreat compared to their first innings. It was plain to the practised eye, that if they could not win by force, they meant to by stratagem, for all their players had strict injunctions to "play time out." But I am glad to say we got rid of them all for 54, and within an hour and a half of the time appointed for drawing the stumps.

Having 104 runs to win and having only a comparatively short time to do them in, we were anxious to set to work immediately. But no; they would have their allowance of ten minutes between the innings.

Once at work, the ball went merrily to all parts of the field: runs were scored, and the distance between us gradually began to lessen. Johnson's party endeavoured to delay time by every device in their power, and to such a degree that both umpires had to remonstrate with them. This put them out of temper, and for a while we had the game all to ourselves. But our progress began to astonish them, and they pulled themselves together for a final effort. It was not without effect: they soon had our captain, Jerrold, who was playing carelessly. We had now 49 runs to get to win, five wickets to go down, and just 35 minutes to spare. It was my turn then to go in, and I was enjoined to make as many runs as possible, but to be careful. Without being egotistical, I may fairly say that I never played a better innings. Out of the 49 runs required I contributed 31, and then I was not out. It was now a question of time, and the interest increased every moment. Whilst I was in I saw two of my comrades retire. The interest culminated when we had 17 runs to get and 11 minutes to do it in. "Will they do it?" was asked. Hats were flung up, hands clapped, cheers resounded from all parts of the field at every hit. Every one seemed to bear a share of the anxiety. In short, as may be inferred, we won, but only with two minutes to spare. I was seized, and carried or rather pulled to the tent. Our opponents were much chagrined at the result, but bore their loss apparently with indifference.

We stood the vanquished a supper, and as boys can, when they wish, enjoy themselves, we had a "regular jollification." After giving the formal three cheers for the losers, and having accepted three more for ourselves, we parted for the night, and thus ended my first match.

In the next impression of the *Chronicle* I observed the following:—"A new player, who has, we are informed, never played before in a match, then came in. He seemed to carry all before him, and the result of the match may be mainly attributed to his skill. After making 31 he was triumphantly carried out by his excited companions."

JOAN OF ARC.

AT the death of Charles VI., of France, A.D. 1422, nothing could have been more deplorable than the condition of that unhappy country. A few years before the above date Henry V., of England, had gained the glorious victory of Agincourt, and had followed this up by subsequent successes, till at last he was able to dictate terms of peace to the French; one of the conditions of which was that he should espouse the Princess Katherine, daughter of the king of France. Shortly after this marriage, in consequence of the malady under which his father-in-law laboured, Henry had no difficulty in assuming the regency of France, to the exclusion of the Dauphin, Charles's eldest son. The troops of England, combined with those of Burgundy, overran the greater part of France, and laid waste the land far and wide. Famine and desolation pervaded the country. Henry did not long enjoy the fruits of his conquest, being carried off by a mortal disease a few months before the death of Charles VI. The English thereupon proclaimed the infant son of Henry king of France. The Dauphin assumed his hereditary right under the title of Charles VII., to which he was most justly entitled. Though proclaimed king, Charles had little of his hereditary territory that he could call his own. The English were pressing him hard day by day, and Orleans, the chief city that remained to him, was closely besieged by them, and there was every probability that the whole of France would shortly be subdued by them. In the midst of the misery and despair which oppressed every true Frenchman, a deliverer arose from a most unexpected quarter. A peasant girl of sixteen years suddenly appeared before Charles, declaring

to him that she had a commission from the Most High to drive his enemies from France, and see him crowned at Rheims. She made no mystery respecting her origin, declaring herself to be one Joan of Arc, a girl of humble parentage from a village called Domreney in Champagne, but persisted in her statement respecting the superhuman nature of her mission. In proof of which she singled out the king, whom she had never seen, from amid a crowd of courtiers with whom he had mingled to test her prophetic powers. She acurately described a sword, reported to have belonged to St. Catherine, to use which she claimed the privilege. On inquiry, her character proved to be one of extraordinary piety. She had, from her earliest youth, been of a devout disposition, and had passed much of her time in retirement. She had heard, from all sides, of the miseries inflicted on her country by foreign invaders, and, having witnessed the ravages they committed, conceived the lofty design of ridding France of such terrible foes. Patriots are not, as a rule, men who sustain their lofty pretensions for disinterestedness; in fact, Dr. Johnson has gone so far as to say that the last refuge of a scoundrel is to turn patriot; but even his rugged cynicism would have allowed the title, in its fullest integrity, to Joan of Arc. Pure, holy, charitable, and humane, did she come forward as the champion of that liberty which is most dear to every true and loyal heart. The king at last resolved to trust his cause to her, and it was from the hands of Charles himself that she received the sacred banner that she bore aloft to cheer on her companions in arms to the gigantic task of expelling a foe that repeated success had rendered invincible in the estimation of both French and English. That must have been a cold and cowardly man whose heart did not beat more quickly at the sight of such a heroine, who was enough to incite every Frenchman to rush and join in a struggle headed by so wondrous a leader. The sight of a fair innocent girl, arrayed in a suit of armour and mounted on a war horse, cheering her followers to victory, must have roused the dormant chivalry of France; and so it did, for in a short time the siege of Orleans was raised, and the English army defeated with the loss of their leader, the gallant Earl of Suffolk; and not only was this achieved, but Charles was conducted to Rheims by his gentle deliverer, and there crowned according to the custom of his ancestors.

This having been accomplished, Joan declared her mission to be ended, and, throwing herself at her sovereign's feet, begged permission to be allowed to retire to that obscurity from which she had only emerged to fulfil the high and holy purpose that she had so wonderfully achieved. Her presence being required to induce the soldiers to

persevere in the work of expelling the English, she was unhappily prevailed on to obey the wishes of her sovereign, and remain with the army, which had been so victorious under her leadership. At the siege of Compiègne she was taken prisoner by the Burgundians, who delivered her to the English. And now comes the portion of her story that renders her most interesting in our eyes, and that is her trial and execution.

After her capture she fell into the power of the Bishop of Beauvais, a Frenchman devoted to the English cause, and was tried by him on a charge of witchcraft and imposture. In her hour of adversity she was deserted by those to whom she had been so great a benefactress: the King of France made no effort in her behalf. Her trial was conducted with total disregard to justice or mercy, and she was condemned to be burnt. This atrocious sentence was not carried out at once: she was permitted to languish in prison nearly a year, a promise having been exacted from her that she would never again assume male attire. To test her sincerity, or rather, as it would seem, to entrap her, a suit of armour was placed within her reach. Wound up to a pitch of enthusiasm by the sight of habiliments which recalled the glories of her past career, she donned the warrior's dress, and was thereupon condemned to the stake as having relapsed into her former errors.

During her trial and imprisonment Joan had betrayed symptoms of weakness, and was led, struggling and weeping, to execution; but when the moment arrived that was to confer on her the bright crown of martyrdom, the soul of the patriotic girl shone forth with renewed splendour. Her tears and struggles ceased at the sight of the pile raised for her destruction. She burst forth into loud protestations of her innocence, invoking the aid of her adorable Redeemer. Embracing His crucified image, she was seen by the man of God, who remained near to the last, as the flames enveloped her mortal body, yielding with joy her soul in holy faith and hope to Him who was her Judge and Saviour. It has been well said by a great writer, that of all men Englishmen are the most ready to acknowledge their faults, and, as far as they can, repair them. So is it in the case of Joan of Arc. The guilt of her murder lies at our door, but there is no Englishman worthy of the name who does not revere the memory of so noble an antagonist as was Joan of Arc; and now that the researches in the Royal Library at Paris are day by day bringing out her character in brighter and more glowing colours, none are more interested in the subject than educated Englishmen, and none more delighted that the claim to be heroine and patriot has been clearly established for Joan of Arc.

Stephen Scudamore the Younger;

OR

THE FIFTEEN-YEAR-OLDS.

A STORY OF BOYS' ADVENTURES AT HOME, ON BOARD A PASSENGER SHIP, AND ON THE AUSTRALIAN GOLD-FIELDS.

By ARTHUR LOCKER.

PART IX.

A night's 'possum-shooting.—Muzzler in a terrible predicament.—Strange disappearance of old Banbury.—We begin digging again.—A blow-fly's complaint.—Cedar Joe, the bullock-driver.—Finding gold at last.—The twelve Cæsars. Their fondness for rum.—Advantages of teetotalism.—Discovery of a wonderful stone.—Story-telling by the family fire.—Sam Skilbeck's anecdotes.—Jemmy's tale of the sly German.—My tale of the hot pickles.—Prawle's story of the Greenwich milliner.—Reappearance of Banbury.—How to make a tent comfortable.—Centipedes and bull-dog ants.—Attack on the gold escort.—Alone in Tom Prince's store.—An Essex man pays me a visit.—Trying on boots.—My customer astonishes me.—A free pass.—Mr. Potter again.—Skilbeck finds something extraordinary at the bottom of an eighteen-foot hole.—How we hid away our big nugget.—The journey to Melbourne.—Bailed up!—The big damper.—Safely lodged in the Bank.—A dust storm.—Old Prawle's letter.—Conclusion.

"THERE must be an opossum there," said I.

"I don't see any," replied Mr. Skilbeck, as he peered among the branches, and then lowered his gun. "When Muzzler hasn't been out for some time, he barks at everything. Most likely what he saw was a native cat."

"What are native cats like?"

Instead of Mr. Skilbeck answering my question, Mr. Skilbeck's gun said "bang!" and something dropped at my feet.

It was a small creature, about the size and shape of a weasel, and covered with black spots.

"That's a native cat," observed Mr. Skilbeck. "Terrible noosances they be in a poultry-yard. They're worse than foxes in the old country. They carry off the chicks, and suck eggs by the dozen."

"What is a kangaroo-rat like?"

"It's a pretty little thing, just like a minniter [Mr. Skilbeck meant "miniature"] kangaroo. I wish I could shoot you one. When I was——"

Here Muzzler interrupted his master by barking with extraordinary fury at the foot of an aged and gigantic red gum-tree.

"There's a 'possum there, and no mistake. I can tell that by the difference of his bark. It's what I call a hearnest bark—no make-believe about it. Ha! there he is!"

Sam Skilbeck pointed up among the branches, which stood out black and clear in the bright moonlight, and on one of the limbs I saw something which looked like a wen or excrescence.

"D'ye see him creeping along? I'll give you the first shot, Master Stephen. It's a light gun and a light charge, so you needn't fear its kicking."

Bang!

"Good. You've touched him." Sam Skilbeck took the gun, and fired the second barrel. The opossum fell, but caught a branch with his tail, and hung suspended there. "They take a wonderful hold with their tails, do 'possums," observed Mr. Skilbeck. "I've sometimes fired a dozen shots, and even then they wouldn't drop. They cling after they are stone dead."

Bang!

"That was right in his skull."

A moment after the opossum fell.

"Down, Muzzler!" shouted Sam. "Look at him," he said, holding him up by his tail; "he's a fine fellow."

The opossum was twice or thrice as long as a cat, with a cunning face and sharp-pointed nose, a very bushy tail, and a coat of the softest fur.

"You'll excuse my giving you a bit of advice, Master Stephen. If you riddle the skin, you spoil it. You should always aim at the head."

"I was only too pleased to hit him anywhere," I answered.

"Ay, but a true 'possum-hunter never aims except in the head. This skin and all we get to-night will go towards a rug I'm making for my grandmother down in Hertfordshire. Wonderful old lady she is,

close on ninety, and reads her Bible without glasses. Such fur as this will keep her old bones warm in bed, eh?"

"And what do you do with the carcases?"

"I biles them for Muzzler's dinner."

"Don't people ever eat them?"

"Some does. They taste too strong of peppermint to please me. I'd as lief eat a fox. But they say if you bury 'em in the earth for a few days, they come out quite sweet."

During the next hour little conversation took place, for we had excellent sport. Thirteen opossums fell to our gun, and I was quite proud when I brought down one at a single shot right through the head.

"I call that first-class, Master Stephen," cried Mr. Skilbeck, approvingly; "but you must take notice that he is a young 'un, and not up to the tricks of the old hands. An old 'possum never shows you his head if he can help it, and always creeps along the upper side of a branch."

"How Prawle would enjoy this!" I observed.

"Ah! I'll bring Prawle out another night," replied Mr. Skilbeck, "but I don't expect he'll do much good with a gun. He's a young genelman with a wonderful gift of the gab, and I've mostly remarked that great talkers are bad sportsmen."

As we were returning homewards, bending under the weight of our spoils, we met with rather a singular adventure. Muzzler barked vehemently at the foot of a tree, and not content with this, forced his head into a hole at the root, which was no doubt the entrance to the opossum's dwelling-place. While Mr. Skilbeck and I were gazing anxiously upwards to see if we could discover our game, Muzzler's bark suddenly changed into a doleful whine.

"Hollo! Muzzler, what's the matter?" said Mr. Skilbeck.

We soon discovered what was the matter. The poor brute had got jammed in the narrow passage, and could neither go forwards nor backwards.

"Here's a job!" said Sam; "if we can't drag him out, I must cut him out with my clasp-knife."

While he was searching his pockets for his knife, I heard a loud hiss close by me. I looked down and saw a black head protruded from the hole in the tree, close to Muzzler's tail. A moment after, a long body followed. It was the head and shoulders of a snake!

If I had had time for reflection, I should not have dared to do what I did. But I did not reflect, I seized the reptile by its neck, and holding it firmly, exhibited it to Mr. Skilbeck.

"That's right," he observed, as coolly as if I had been holding his shot

pouch. He then drew his knife, and cut the beast's head clean off at one blow.

"Now," he exclaimed, "I call that a plucky action. I didn't dare tell you the risk you ran, or you might have let go and got bit. That's a diamond snake, one of the venomousest creeters that crawls. I hope he haint bit Muzzler."

Mr. Skilbeck now carefully cut away some of the wood of the tree, and then taking his dog by the hind quarters, dragged him out by main force. It was quite a sight to see the gratitude of the poor brute; he licked our hands over and over again.

"I don't think he is any the worse," observed Muzzler's master. "As for this 'possum, we'll leave him till another night. It's time to be in bed and asleep."

On reaching home we found Toby Wheeler fast asleep, but no Banbury poking his white nose into the tent. "It's very strange," said Mr. Skilbeck; "I never before knew him act like this; he must have gone feeding on the ranges. He'll be back at daylight."

But when daylight came, no Banbury appeared, and though Mr. Skilbeck and his mates searched the country for miles around, no news could be obtained of him. Toby was a heavy sleeper, and had heard nobody prowling about the tent; but Mr. Skilbeck declared that Banbury must have been stolen, for that he would never stray away of his own accord for more than a few hours.

A few days after this Prawle's maimed fingers were pronounced by skilled surgeons, namely the party of good-natured Vandemonians, to be once more fit for duty; whereupon we determined to re-commence gold-digging. I was growing tired of shopkeeping,—it seemed an unnatural sort of life in the bush, and was glad to go back to the work for the sake of which we had visited Australia.

We scarcely knew Jemmy Wallington when he returned from Dead Dog Gully. His fair skin had been tanned brown, his cabbage-tree hat was battered, and the ribbon discoloured by the sun; he looked like a regular old chum. He also brought with him four ounces of gold, his share of the profits, earned by no sudden stroke of good luck, but by steady and continuous hard work. Jemmy was now so much more experienced in gold-digging than either myself or Prawle, that we unanimously appointed him captain of the party, and I am bound to say that he did not abuse his position.

Under Jemmy's directions, which were approved by Sam Skilbeck, we now commenced sinking a shaft of our own in entirely new ground. It was pretty severe work, for the weather was oppressively hot, and old

Prawle declared about twenty times a day that his back was broken. "My back is as long as both of yours put together," he used to say, "so no wonder I feel it more!" The truth is that Prawle, though one of the most active, handy fellows in the world, did not relish hard, steady work. However, he took it very good-naturedly, and never lost his temper, not even when I carelessly let a bucket go which hit him on the head. "I say," he shouted, "don't do that again, or I shall kick the bucket."

"Getting" was, I think, the most laborious work, as the "getter" was obliged to sit crouching as if his legs were in a mediæval instrument of torture—"the scavenger's daughter" I believe it is called—and Prawle, being long in the legs, was always having the cramp, or assuring us that he had enough pins and needles in his feet to stock a haberdasher's shop. But the "getter" had some advantages; he was shaded from the fierce rays of the sun, and he was not much worried by the flies, though Prawle declared that there was one especial blow-fly of gigantic proportions which had taken an especial fancy to himself, and was always buzzing her maternal grievances into his ear, while he was down in the hole. If Prawle may be believed, this is how she used to talk:—

"I always endeavour, Mr. P., to give my children the best possible education; but my efforts are frequently defeated. Only yesterday I deposited a healthy and thriving family of five-and-forty under the flap of a mutton-chop, but your meddling cook, Jemmy Wallington, must needs scrape all but four off with a table-knife; and those four were roasted and eaten by you. I hope you enjoyed them. Buz—buz—buz!"

At last we bottomed our hole. Mr. Skilbeck came to look at it, and pronounced it to have been dug in a fairly workmanlike manner. He washed a few handfuls of the "dirt," and found a speck of gold, which he considered a good sign. The gold-bearing stratum must be exceedingly rich for the precious metal to show in any quantity. We had still a great many difficulties to contend with; for when we had tunnelled to some distance, and had accumulated a pile of wash-dirt as big as our tent, we had no water to wash up with. The nearest water fit for such a purpose was now two miles off. How we wished that we had not sold Topsy! But it was of no use regretting past follies; so we made a bargain with an old bullock-driver that we should have the use of himself, his team of bullocks, and his dray, for the moderate sum of three ounces of gold, or about ten pounds sterling per day. We looked forward with intense anxiety to the results of the first day's washing. We only obtained two ounces and a half; so that, after all our labour, we actually had to pay the bullock-driver out of our own pockets. "Come,

mates," he said, "I don't want to be hard on you,—give me half shares, and I won't grumble." We consulted Mr. Skilbeck on this point. "Don't you make any such bargain," he said, "for more than a few days." The next day we got three ounces, then only an ounce, at which "Cedar Joe"—so called because he had been a cedar-sawyer on the Sydney side—began to grumble; but the day after, we got four ounces, then six ounces, and then eleven ounces! We were delighted that our contract was only for a week. But that old rascal, Cedar Joe, vexed at losing the profits he had expected, went and spread exaggerated reports of our success, whereupon a party a dozen strong—great, big, bullying fellows,—came and sank shafts all around us, and drove on every side into our tunnels. And now I will tell you a curious anecdote, which illustrates the indirect advantages of teetotalism when you are on the gold-mines. This rowdy party of twelve—Prawle christened them the twelve Cæsars, because they were ready to *seize* everything they could lay their hands on—were always knocking off work for the sake of obtaining strong drink; for though the sale of ardent spirits was strictly forbidden on the mines, under heavy penalties, there were plenty of sly grog-shops where liquor could be obtained. I remember that when Prawle was selling his "jump-up" ginger beer, diggers would often say, "Can't ye put any eye-water in it, mate?" Now Prawle and Jemmy and I, and Mr. Skilbeck and his mates, never drank anything stronger than tea, yet we were all well and hearty. Now for my anecdote. We were driving a tunnel, let us say, in a northerly direction, the party in one of the opposition shafts were driving in a southerly direction; so that before long our galleries would join. There was, accordingly, a spirited race between us to see who could get most of the debatable territory that lay between. As they were men, while we were only lads, they could work much quicker than we could. I was down in the tunnel "getting," and I could distinctly hear the strokes of the opposition pick, which showed that our enemies were within a few feet of us. Presently the sound of the opposition pick ceased. I was curious to know the reason, so I came out under the mouth of our shaft, and asked Prawle why the twelve Cæsars had knocked off work. "Because," he replied, whispering down the shaft, "because Caligula"—this was a truculent-looking scoundrel with a black eye—"because Caligula has just brought a bottle of rum, and Nero and Vespasian have gone to help him drink it."

On hearing this news, I set to work again, tunnelling harder than ever. In about an hour's time my pick seemed to enter the wall of stiff clay with extraordinary ease. I drew it out, and saw a faint ray

of daylight beyond. I had driven into the tunnel of the Imperial party —the wall of clay was only a few inches thick! I now set to work to dislodge a stone which obstructed the passage. I was rather surprised to see the stone, for I had hitherto met with none at this depth—I had encountered nothing but tough, marly clay. I struck my pick against the stone, and it felt as if it made a dent in it. A moment later I perceived that the stone was of a yellowish colour! I now grew so excited that I almost lost my head; but I worked away, and in five minutes had the supposed stone in my hands. It was of a strange shape, more like a dumb-bell than anything else I could think of. I could scarcely believe the evidence of my senses; but there was no mistake about it, *it was a large nugget of pure gold!* Carefully concealing it in the breast of my jersey, I bade Prawle lower the rope, for that I wanted to come up.

"You look pretty warm, Stephen," he said; "but you don't mean to say you're tired?"

"Yes, I am; I want a spell. I have driven right into the Cæsars' camp."

"Hurrah!" added Jemmy. "Then we've won the battle of Philippi. Which was it—Philippi or Actium, Stephen?"

"I can't tell you," I whispered in a low tone; "but if you and Prawle will sit down behind this bank of earth, I'll show you the spoils of the victory."

I leave you to conceive the astonishment and delight of my companions. In the course of the evening the nugget was weighed in Tom Prince's grocery-scales: it was far beyond the powers of his gold-weighing apparatus—and was pronounced to weigh eighteen pounds troy! It was worth, at the price then current on Bendigo, about £700. Now, on examining this nugget there was plainly discernible the mark of a pick-axe on the side *opposite to that* from which I had attacked it, clearly showing that it was actually under the very nose of our enemy Vespasian; and that if he had not been seduced away by that fatal bottle of rum, in two minutes more the nugget would have become the property of himself and his mates!

When Tom Prince heard this, he bade us say nothing about the exact spot where we found the nugget, "for," said he, "those fellows are capable of threatening to murder you, unless you hand it over to them." Prudent Tom Prince also advised that we should keep the story of the discovery of the nugget a close secret from everybody, even from our dear friend Sam Skilbeck; "for," said he, "Sam is fond of gossiping by the fire when work is done, and the news would be soon all over the gully."

In the course of the next day we found three other nuggets near the same spot, but their size was nothing in comparison,—they might altogether make our booty worth £800. The wash-dirt from this part of the hole was very rich, and altogether yielded us about £200. So here were we three young fellows, whose united ages only amounted to about forty-six, worth a thousand pounds sterling! We could scarcely realize our good fortune; and were surprised to find that we did not feel a bit happier than before this piece of luck happened to us; for then we lay down at night and slept like tops; now we were always fancying that bushrangers had broken into Tom Prince's tent, where our treasure was deposited.

"I shall never feel easy," said old Prawle quite seriously,—for, under the influence of wealth, his capacity for joking had deserted him, "till that gold is safe in one of the Melbourne banks." And he advised that, till we were ready to go down to Melbourne—for we did not like to abandon our profitable hole as long as there was a pound of washable dirt left—he advised that, till that time, we should sleep by turns in Tom Prince's tent, by way of alleviating our anxieties.

I must now turn for a while to other subjects. We had all abstained, though with some pain and difficulty, from telling our beloved friend Sam Skilbeck about the big nuggets; but he knew that we had done well with our wash-dirt. We were standing one evening round the family fire, as we called it—a huge mass of logs, which was replenished every day, and had not been extinguished since the last thunderstorm. The warmth of this fire was generally enjoyable after nightfall; for though the days were scorching hot, the nights were often extraordinarily cold, colder even than summer nights are in England. Sam Skilbeck was smoking his pipe, and Prawle, who also had lately taken to that pernicious habit, was puffing away opposite to him. Sam was in a particularly talkative humour, and was chatting away, as the Latin proverb has it, *De omnibus rebus et quibusdam aliis*—about everything in the world, and something else into the bargain.

"How the country has changed since I first come into it twelve year ago! Melbourne was a poor little place then, no bigger, and nearly as dead-alive, as my native village in Hertfordshire. The stumps of the old forest trees were still standing in Collins-street, and hundreds of black fellows used to camp out in Richmond Paddock. Who'd ever ha' thought there was all this riches lying buried in the bowels of the earth! In those days people talked of nothing but bullocks and jumbucks."

"What are jumbucks?" asked Jemmy.

"It's the black fellows' word for sheep. And, do you know, about five year back, me and a party of overlanders, as were bringing a mob of cattle down from Deniliquin, on the Murray, camped out on this very Bendigo gold-field. The overseer of the run (I dare say he's here still) asked us if we'd mind staying a day, and help him put up a wool-shed. We agreed, and I recollect we sunk the posts three or four feet into the ground. Now that wool-shed stood in the middle of Golden Gully, the very richest part of the Bendigo; and if we'd only known it, our picks and shovels were within a few inches of enough gold to buy all the wool that would be stored in that shed for years and years."

"It certainly seems strange," I said, "that the gold was not sooner discovered."

"Why, you see," replied Mr. Skilbeck, "until California broke out nobody had any more idea of looking for gold in the Australian bush than they had of hunting there for elephants. Now everybody keeps a bright look-out, just like a retired tradesman I once know'd as lived in the Borough. You know the Borough, Mr. Prawle?"

"Rather so. And what did the retired tradesman do?"

"Well, he did nothing, 'cause he had got plenty of money; so he used to saunter along the streets, sweeping the roadway in front of him with his eyes, and, if you'll believe me, in about thirty years that man picked up a wonderful lot of things: I recollect a pocket-comb, a tailor's pattern-book, a thimble, to say nothing of three five-pound notes—which proved arterwards to be Bank of Elegance—wrapped in a clean pocketankercher. It's the same with gold-digging, everybody has his eyes open nowadays. Why, look at what happened on the Sydney side. There was Doctor Thingumbob, as had a black fellow for a groom; this black fellow had ridden along one particular road hundreds of times, and had continually passed a big quartz stone that jutted out of the bank at the side of the road. But when Hargreaves came over from California, and gold began to be discovered in New South Wales, Blackey pricks up his ears, goes and looks close into this quartz rock, and finds that it's a magnificent specimen,* weighing upwards of a hundredweight."

"Don't you suppose, Mr. Skilbeck," I asked, "that anybody knew of the gold in New South Wales till Mr. Hargreaves came there?"

"Ah! There's a tale hangs by that too. There was Cranky Isaac, a shepherd up in the Blue Mountains, an old grey-headed chap, as had been lagged for bread-rioting ever so many years ago, before the Battle

* The word "specimen" is used by the gold-diggers to denote a conglomerate of quartz and gold; "nugget" implies a pure lump of the precious metal.

of Waterloo. I've heard my grandmother talk of it: the rioters used to go about with a quartern loaf on a pole, dipped in sheep's blood, and the cry was, 'Bread or Blood.' Well, this Cranky Isaac came into Sydney once a year, and while there, drank the best of liquors, and paid his score with bits of raw gold. This came to the ears of the police; he was took up, and charged with robbery. He denied being a thief; vowed that he had never in his life wronged a man of a halfpenny; and insisted on being brought before the Governor privately. Well, and what does the Governor do? Why, orders him to be set at liberty, and, it is said, paid him a pension to the day of his death."

"Why did he pay him a pension?" asked Prawle.

"To keep Cranky's mouth shut. He told the Governor where he had got the gold. The Governor feared that if the truth was known, all the convicts would break loose; so he bribed him to say nothing about it. Now then, I think I've talked enough for the present, so let's hear a tale from one of you young gentlemen."

"Prawle! Prawle!" cried Jemmy and I.

"No, no," said Prawle; "*Juniores priores.* Let's begin with the youngest—Master Stephen."

"I don't know anything," I said.

"Don't know anything! Why, tell Sam and Jemmy the story of the pickles. Look how he's blushing! He has never dared to let it out."

"It's nothing to be ashamed of," I answered. "Well, you must know that when I was shopboy to Mr. Tom Prince, there were two diggers, who lived a little way down the gully, who were excellent customers. They were very fond of eating: they spent all their money on delicacies; and every day came to the store for rashers of bacon, pots of marmalade, dried fish, and such-like luxuries. They were also fond of pickles, and used to eat a bottle of mixed pickles between them at a sitting. One day one of them came as usual for a bottle of pickles; I could not find a bottle on the counter; Tom Prince was out; so I opened a fresh case, and handed one to him. An hour after, one of the diggers came over with a very red face, and made signs to Prawle for some ginger beer. He drank a glass, made signs for another, then another, and then another, till he had had six glasses; he then found his tongue.

"'You've nearly murdered me,' he gasped, 'and you've quite murdered my mate. Come and see him, and fetch some physic with you.'

"We found the poor fellow stretched on his back, looking uncommonly bad; but Prawle gradually brought him round. I had by mistake given them hot West India pickles, and the fellows had devoured a whole bottle! Now then, Jemmy, it's your turn."

"I haven't got a story of my own, so I must tell one that Toby Wheeler told me. Did ever you hear of Chouser's Gully, Mr. Skilbeck?"

"No, I can't say as ever I did. That's a rum name to give a gully."

"Yes, it is; and that's why I tell you the story. Not long ago there was a German called Hartmann, who was travelling with a team of bullocks and a waggon-load of stores, in search of some place where he might put up his tent and begin business. He came to a certain gully, a beautiful spot. There was plenty of timber, a stream of sweet water, and excellent feed for the cattle. He longed to settle there; but he hesitated, because there were only half a dozen parties at work, and none of them appeared to be doing much good. At length his German love for comfort prevailed; so he pitched his tent on this pretty little gold-field. But mining there grew more and more unprofitable. First one party went away, then another, till at last no one was left except two brothers—tall, thin, lantern-jawed fellows, with appetites like cormorants. For weeks past they had been so unlucky, that they never got enough to eat. One day they came to the storekeeper, saying that they also must leave, and begging him to give them a little flour and sugar on credit.

"'How shall I ever see you again?' demanded Mr. Hartmann. 'Already you owe me four pounds. Yours is a very bad hole, is it so?'

"'A regular duffer,' replied the brothers.

"'Couldn't it be made a good hole?'

"'I don't see how.'

"'You wait till to-morrow morning. Go there at daylight.'

"At daylight one of the brothers descended his shaft, and, wonderful to tell, found at the bottom a piece of bacon, a Dutch cheese, and a two-stone bag of flour.

"'Is the hole better now?' asked Mr. Hartmann.

"'Much better,' answered the brothers.

"'Good. Perhaps it will go on improving. Meantime,' says old Hartmann, winking his eye, 'you can go round the country and tell the people how rich our soil is here.'

"The brothers did so. Next day they went down the shaft again, and found a quarter-chest of tea, a bag of sugar, and a bottle of Hollands.

"'How do you like the hole?' asked Mr. Hartmann.

"'Better than ever,' answered the brothers.

"It was reported all over the district that a wonderful find had taken place on this gully. Diggers flocked there by the hundred, sank numbers of fresh holes, and Mr. Hartmann did a roaring trade.

"There had not been enough hands until now to prospect the gully properly. Gold was now discovered in abundance, and everybody was in high spirits. The story of Hartmann's trickery got wind, but as all the diggers had profited by it, they thought no worse of him, except that they christened the scene of his operation 'Chouser's Gully.'"

"Bravo, Jemmy!" cried Prawle. "Now, then, it's my turn. I believe Jemmy and Stephen have heard my story before, but Sam Skilbeck hasn't; so here goes:—In my native town of Greenwich there was a young man named Branfield, who fell in love with a milliner, a very pretty girl at a shop in Stockwell-street. His relations were people who held their heads very high, and when he married her they would have nothing to say to him. Branfield became disgusted, and as he had five hundred pounds of his own he determined to emigrate to Australia, and become a sheep-farmer. He got to Melbourne just as the diggings had broken out; all the country was in a state of confusion, and no shepherds were to be had for love or money. He was at his wits' end what to do; but Mrs. Branfield was as clever as she was pretty, and she said—

"'My dear, let us open a milliner's shop. We can stock it, to begin with, with my new dresses and bonnets.'

"The shop was opened, and she soon became the most fashionable milliner in Melbourne. I went to call on Branfield on the strength of being a fellow-townsman. He was civil enough, but far too busy to ask me to dine with him. While I was waiting in the shop a digger came in with his sweetheart, as rough a looking couple as you could pick out of Big Bourke-street. The lady began to order all the most expensive things she could think of; ribbons, lace, satin, silks, nothing came amiss to her. At last the digger got tired, he yawned half a dozen times, and said—

"'Polly, I can't stand this any longer. You'll find me in the Puddlers' Arms.'

"Then turning to Branfield, he asked the price of a cheval glass which stood in the shop.

"'That is not for sale,' answered Branfield, smiling, 'that's for the convenience of our customers.'

"'But I suppose,' said the digger, with an oath, 'you'd sell it if I gave you enough for it? How much do you want?'

"'Well,' says Branfield, 'I couldn't replace that glass for less than eighty pounds.'

"'Here you are,' cried the digger, shoving a roll of notes into my lucky townsman's hand; 'and mind—rig Polly out like a duchess.'

"Now at the further end of the shop there was a very plainly-dressed lady talking to Mrs. Branfield about a bonnet. Just as the digger was about to leave we heard her say, 'I'm afraid I can't afford that. It's too dear.'

"'Too dear, Marm!' exclaimed the digger, 'not a bit of it. Here, I'll pay for the bonnet, and if there's any change out of that,' handing Mrs. Branfield a bank note, 'sling it over to Polly.'

"'Do you know who that was?' said Mr. Branfield to Polly, after the lady had left.

"'No, I don't. She ain't got much tin to boast of, I fancy.'

"'She is the wife of the Governor of Victoria!'"

"I say," exclaimed Mr. Skilbeck, as soon as he had finished laughing at Prawle's story, "what's that moving over yonder? I fancy I hear a horse's feet, but this here fire-light dazzles my eyes."

"I see a horse," answered Prawle; "a white horse with a saddle and bridle on."

"Why what wonderful eyes you've got!" observed Mr. Skilbeck. "I can scarcely see anything but a sort of whitish figure. How came you to have such eyes?"

"When I was a baby," answered Prawle, gravely, "our tom-cat was in the habit of sitting under the bed. As I lay in my cradle he used to stare at me, and I stared back at him. His eyes shone like two live coals, and I suppose mine caught the reflection. Why, Sam," cried Prawle, interrupting himself, "the horse has gone and lain down in front of your tent!"

At these words we all rose and crossed hastily over to Mr. Skilbeck's tent. Yes, sure enough, there was a white horse, and as we drew near he got up, neighed, and then came and rubbed his nose against Sam's shoulder.

"If it isn't Banbury, it's Banbury's ghost!" gasped out that gentleman. "Why, Banbury, old man, where ever have ye been; and how came you with a saddle on your back, and a bridle on your neck? You left me with neither saddle nor bridle."

"See! Mr. Skilbeck," said I, "the rein is broken."

"Ay, so it is. Now, I'll warrant Banbury has been tied up somewhere and has broken away, and come home. Can't you speak, Banbury, and tell us what has happened to ye?"

Banbury did not speak, but he put his head into an empty bucket as a hint that he was thirsty. He was soon supplied with a plentiful drink of water; Skilbeck would rather have had no tea for breakfast than let his favourite be stinted. His saddle and bridle were then taken

off, he received a good rubbing down, and finished the evening by dipping his nose into a bag of oats.

Next morning Mr. Skilbeck came over to us at breakfast-time with a very surprised expression on his face.

"I was grumbling and growling," he said, "this morning, and reckoning that with one loss and another I was no better off than when I came on the Bendigo. But I've had a windfall since then. Just now I took up that saddle that Banbury brought in last night, and began to look at it. The saddle was quite new, yet there was a hole cut in the pad which had been sown up again. 'That's queer,' says I, 'I'll unrip you.' So I unripped it, and I found stowed away inside between thirty and forty ounces of gold in half a dozen different packets. See, there's writing on them," he continued, handing a packet to Prawle.

Prawle read aloud as follows :—

"Sample of gold from Three Mile Creek, Nov. 14th, 18—. Found on a schoolmaster. Gave no trouble. 'Barkers' not needed."

Another ran thus :—

"Sample of gold from Saw-pit Gully, Nov. 15th, 18—. Found on three diggers. Drunk and obstinate. Left them tied to three trees as a warning."

"I say, Banbury," exclaimed Mr. Skilbeck, as he went and fondled his horse's ears, "you've been carrying a nice sort of genelman on your back, haven't you?"

I have already made a few remarks on tent life, but I should like, before wishing my readers farewell, to say a little more on the same subject. If you are perpetually shifting about from place to place, it is almost impossible to make a tent a very comfortable dwelling: in such cases it is advisable to carry a sheet of mackintosh cloth to spread on the ground under you at night, as it keeps the damp from striking upwards, and saves the traveller from the danger of rheumatism. But when you are settled in one spot, as we were on Iron Bark Gully, it only needs a little activity and handiness to make yourself pretty snug and cosy; but some fellows are so lazy and, if I may use the expression, so piggish, that they won't take the least trouble even for their own benefit. I have seen men—men, too, of good birth and breeding, and accustomed in England to every luxury—who were content to creep night after night into their blankets spread on the bare earth, and who used to cut up their meat with a pocket-knife, holding the frying-pan on their knees by way of a plate. We preferred to do things in a more civilized style. First, with regard to the tent itself: we bought a horse-load of rough slabs from a bush-splitter, built them up to a height of four

feet from the ground, and then placed our tent on top of them, thereby gaining a greater elevation of roof, and having a solid wall, which prevented the incursions of native cats. We bought a large sheet of canvas, and stretched it over the top of the tent at a distance of about two feet. This is called a "fly," and adds greatly to the coolness of the tent, especially if a covering of green boughs is placed between the two roofs: even then the tent was often insufferably hot. Tom Prince lent us a thermometer. I have seen it as high inside the tent as 120 degrees, while at night perhaps it would descend to 45 degrees, making us glad to heap all the clothes we could muster on to our beds. Talking of beds, we manufactured three very simple and excellent bedsteads. For each of these bedsteads, four small posts were driven into the ground in the form of an oblong square; the posts were connected together by four strips of wood, and then a flour sack cut open was stretched over all, and fastened with tin tacks. For beds we bought a few yards of calico, made the calico into large bags, and stuffed them with fern-leaves, putting in a few leaves of the musk-tree, which affords an agreeable scent, and is said to keep insects away. I never wish to sleep on a sweeter-smelling or more elastic bed. But our greatest triumph, of which Jemmy Wallington, who was chief carpenter, was immensely proud, was our table. It was rather rough and uneven, but, as its legs were imbedded in the ground, it could not waggle about. Then we had three stools, sawn from a round log of wood. For shelves, sheets of bark were hung on strings round the tent. On these we kept our cooking implements and other utensils. If you had seen us on a Sunday evening, with our lamp lighted—it was made of surplus fat poured into a pannikin, with a twisted piece of rag for a wick,—Prawle and I reading books, and Jemmy at the table writing a letter to his mother in Huddersfield, you would have said we were quite a civilized trio of diggers. The real charm of this life was that there was never any idle time. When our mining work was over, there were clothes to wash, dampers to make, stores to buy, carpentering jobs to be done; there was always something to keep us employed.

A few more words about insects. We were extremely lucky in Iron Bark Gully with respect to mosquitoes. They troubled us very little, I think because the situation was dry and elevated; but in low swampy places they are a great torment. As far as my experience goes, I found them worse in the middle of the town of Melbourne than anywhere else. Prawle was once bitten on the foot by a tarantula spider, as he was getting out of bed. The foot swelled, and became very painful, and for several days he could only wear an easy old slipper; but before long the

swelling subsided and disappeared. One day I was carrying pieces of wood from a deserted "shanty" which stood near our tent. My arms were bared to the shoulder: I felt something on one of them; looked over my shoulder, and saw an immense centipede, as long and as thick as my finger, crawling on my naked flesh. I snipped him off with my finger and thumb before he had time to do any mischief. On another evening, I was alone in the tent writing a letter, when I saw a great bull-dog ant on the table. These rascals are fully an inch long, with a dreadful sting and a formidable pair of nippers. I held out my pen to him, and he instantly seized it between his forceps. I then crushed him, and went on writing. But presently I saw another bull-dog on the table, then another, and another. I got up in a great fright, and found that a whole regiment of them were climbing up the leg of the table. Sam Skilbeck was our constant resource in any difficulty, so I called him in.

"Ah!" he said, "you've put up your tent over a bull-dog's nest. They don't care for sweets, but they've an uncommon relish for a bit of meat. If you can't find the nest you'll have to shift your tent."

We did not sleep very comfortably that night, fearing that we should be stung, but no such misfortune befell us. In the morning, after a careful search, we found the entrance to the nest. There was no heap of earth by which to know it, merely two or three small round holes in the ground; but Mr. Skilbeck said he was sure of it, and just then a rash young bull-dog settled the question by showing his nose at the hall-door.

"How are we to get rid of them?" we asked.

"You must make a kittle of water biling hot, and pour it down their hole two or three times a day. Tom Prince will lend you a kittle. It's more handy than a billy, on account of the spout."

As we had now got everything that was worth getting out of our claim, we made preparations for going to Melbourne, for we really deserved a holiday. Mr. Skilbeck and his mates also talked of going away. A new gold-field was said to have been discovered at Mount Morang, fifty miles off in a northerly direction; and now that they had recovered Banbury, they proposed packing up their traps and trying their luck there. As for ourselves, our treasure, which lay hidden beneath the boards of Tom Prince's store, gave us a world of anxiety. You may wonder why we did not send it down by the Government escort which had lately been established, and which every week carried to Melbourne a large amount of the precious metal. The light waggon which contained the gold was drawn by four smart horses, which were changed at regular stages, and was guarded by a dozen or more men,

fully armed and mounted on horseback. But just at this time we felt no confidence in the escort.

Within a day or two after the discovery of our big nugget, we heard the news of a daring yet dastardly outrage which had been committed within fifty miles of Bendigo. A branch escort, bringing gold from another mining district, was cantering leisurely through the bush. Their attention was attracted by a rude construction of logs and bark,—a sort of breastwork, resembling a native mi-mi, or hut. Before, however, they had had time to remark upon it, a murderous fire was poured forth from behind the breastwork. Several of the troopers fell wounded from their horses, while a party of brigands rushed out, cut the traces of the waggon-horses, and endeavoured to carry away the contents of the waggon. By this time, however, the troopers had rallied; they opened fire on the enemy, who retired without accomplishing their object, leaving two or three of their number on the field. This party of marauders, supposed to be headed by the redoubtable Maconochie, was still at large, and every week it was expected that the Bendigo escort would be massacred for the sake of their valuable freight. We therefore made up our minds that we would carry our gold to Melbourne ourselves, without asking any other assistance.

At this time, when the town of Melbourne was swarming with criminals, and when the police were powerless, so that it was scarcely safe to venture out after dark—there was no gas in those days,—and when all the main avenues to the diggings were infested with footpads and mounted highwaymen, the diggings themselves were remarkably free from crime. As for petty robberies, they were almost unknown. Day after day miners left their tools, their cradles and tubs in their claim, and no one ventured to run off with them. I never heard, during our stay there, of an attempt to rob a tent for the sake of the gold which might be in it; but then it must be remembered that the risk of burglary was very great. Many men kept fierce dogs, and nearly everybody had firearms within reach. I mention these facts in order that the reader may clearly understand that the adventure which I am about to relate was by no means a common occurrence, but of a very exceptional character.

It was our last night on the Bendigo, for we intended to start for Melbourne on the following evening just before sunset. Our purpose was to walk during the cool of the night, and rest during the scorching heat of the day. Prawle and Jemmy were busy at our tent preparing for departure, while I was at the Coggeshall Store, keeping Tom Prince company, and watching over the safety of our nuggets. Tom

was sorry we were going, for he had hitherto been unable to find any person of good character willing to act as his assistant. About eight o'clock he said to me, "You don't mind staying here alone for an hour or so, do you, Stephen?"

"Certainly not. I've often been alone here before, and no one ever offered to hurt me."

"Because I want to go down to Bendigo.* This rush to Mount Morang has almost cleared off my stock of boots; so I must bring up a dozen pair on my back; and I want to see a young fellow who has hurt himself digging, and wants a lighter occupation. Good-bye, I don't suppose you'll have any customers at this time of night."

The silver orb of the moon was just showing through the branches of the forest as Tom Prince took his departure. It was a delicious night—calm and cool without being chilly, so I sat down on a tree-stump before the door of the tent. I had sat thus half an hour or more, when I saw the figure of a man sauntering slowly towards the tent. He was dressed in the ordinary mining costume—a blue serge blouse, cord trousers, and cabbage-tree hat, and he slouched along like a man who had been all his life accustomed to laborious occupations. As he drew near, he stared at Tom Prince's canvas sign-board, and spelt it out with some difficulty.

"C O G, cog; G E S, geese; H A L L, hall. Why, that spells Coggeshall! I say, young measter, be you from Essex, and be there any Essex ca'aves about here?"

"I hope I'm not an Essex calf," I answered, laughing. "The owner of this store, Tom Prince, is an Essex man."

"Ay, I thart he were Essex. I belong to that part myself, down in the mashes, towards Mersea Island. But I hope Tom Prince don't do business in the Coggeshall style."

"What style is that?"

"Why, a stupid style. Down in Essex they call a silly, clumsy job a Coggeshall job."

There was a sort of slow, rustic quaintness about this man which amused me greatly.

"You're not long from the old country?" I ventured to say.

* The term Bendigo at that time was used in a special sense, to denote the central part of the diggings, just as we call a limited district of the metropolis the "City of London." I don't think "Bendigo" had originally any connection with the famous pugilist of that name; it was most likely a corruption of "Bandicoot." The flourishing town which has grown up on this site is called Sandhurst, and its old name is almost forgotten.

"No, young measter; six weeks or thereabouts. It's too hot and dry to please me. I han't had a touch of the 'agur' since I landed, and that bain't healthy, be it? Now, is the measter in? because I want a pair of boots."

"He's not in; but perhaps I can find you a pair, if you'll take a seat on that stump."

I returned presently with all the boots we had remaining in stock.

"Jest you be good enough to pull the old 'uns off, young measter," said the rustic, stretching out his foot,—"my backbone 's stiff with the 'agur.'"

I was stooping down to unfasten the lace-up boot, when I suddenly found myself seized by the collar, while a cold, metallic substance was pressed to my forehead. I was in the grasp of the man on the stump, and he was holding a revolver to my head! The figure remained without change; but the countrified drawl had entirely disappeared. The next words which I heard were uttered in the sharp decisive accents of a well-educated man.

"Make no noise, my little man, or I shall be forced to shoot you. Do what I want, and I won't hurt you. Will you promise to stay here and make no outcry if I release you?"

"I will, Captain Maconochie." I remembered the peremptory commanding voice of the bandit captain.

"Ha! you recollect me, do you, you young rascal? Well, I recollect you too. Now, how soon will this Tom Prince return?"

"Not for half an hour, I think?"

"You are sure?"

"I cannot be quite sure; but he has gone to the Camp on business."

"Remember," said the Captain significantly, "any attempt to betray me means instant death. Come inside, I want to speak to you."

There was a mixture of softness and severity in the voice of this extraordinary man, which seemed to compel obedience. There was nothing truculent in his aspect. His features would have been handsome, if they had not been rendered coarse by dissipation and exposure. Yet he was emphatically a man of blood—not cruel, perhaps, for cruelty's sake, but always prepared to inflict wounds or death, if he could not otherwise attain his object. I did not then know, but I afterwards heard, that it was he who planned and executed the cowardly attack on the escort.

Captain Maconochie sprang nimbly on to our store-counter, and, taking me by the shoulders, made me stand in front of him.

"Now," said he, "I owe a good turn already to your party, especially

to that punchy little warrior, Señor what's his name. If he had not lassoed friend Potter, friend Potter would have conducted me to the inside of a gaol. I'm not pleased with friend Potter. When I took him into my company he was half-starved; I clothed him and fed him; yet he tried to betray me, and he is still on my track. That is why I am here to-night. You must hide me in this tent. They will never suspect a respectable fellow like Tom Prince of harbouring a bush-ranger. Will you do what I ask?"

"How can I refuse you, Captain Maconochie? I am at your mercy."

"Not altogether. I am a little at your mercy also. Supposing, when I am fast asleep and weary, you come and play the part of Jael, the wife of Heber the Kenite? Supposing you nail my skull to the floor with one of your tent-pegs?"

"Sisera did not carry a six-barrelled revolver, captain. You have that advantage over him. Besides, I should scorn to betray you. Whatever harm you have done to others, you have done none to me. You treated us boys with kindness."

"Can I trust you? You have a frank face and a truthful voice. Yes, I will trust you. Mind, not a word to Tom Prince, and I swear by Heaven not a hair of your head shall suffer injury. Let me see," said the captain, descending from the counter and peering about the inner compartment of the store with a candle in his hand—"let me see, I think beneath that bunk would be a snug place to lie. You sleep there, I suppose?"

"Yes."

"And Tom Prince?"

"In the front part of the tent."

"Good." With this single word the robber made preparations for lying down.

You may conceive the excited state of my feelings when I tell you that underneath the spot which he had selected all our treasure lay buried. Yet, I felt a sort of confidence that this man, even if he knew of our hoard, would not touch it. And I even had the impudence to ask him a favour.

"Captain Maconochie," I said, "before you creep under my bed, will you grant me a favour? Within a few days my mates and I propose taking a trip to Melbourne."

"Ah! take care that *my* mates don't meet you on the road."

"It is for that very reason I venture to address you. Will you write something on a piece of paper, asking them to let us alone?"

"Willingly. But, likely enough, they won't respect my orders. Discipline is lax in the Australian colonies. Besides, there are other firms in existence which owe no allegiance to me. However, I will do it. Quick, give me pen, ink, and paper."

A few minutes afterwards Captain Maconochie handed me a document, written in a firm, clear hand, of which the following is a copy :—

"Bendigo, December 21st, 18—

"To Members of the Maconochie Firm.

"The bearers of this paper, Stephen Scudamore, James Wallington, and John Prawle, have done me good service. Let them pass without examination, for one month from this date.

"(Signed) HECTOR MACONOCHIE."

He then crept beneath my bunk, and covered himself with a blanket. Shortly afterwards, Tom Prince returned, panting under a bag full of heavy diggers' boots.

"Done any business?" he asked.

"A man called about a pair of boots, but he bought none."

"Ah! let us hope he'll come again in the morning. I'm dead beat. I shall go to bed."

I prepared to follow his example, though, as you may suppose, I didn't expect to sleep much with such a formidable character beneath me. I was just about to get into bed, when I was dreadfully startled to feel the captain's hand on my foot. I stooped down and whispered, "What is it?"

"Does Tom Prince suspect anything?"

"Nothing whatever."

He had scarcely spoken, when we heard footsteps outside—the footsteps of more than one person. The footsteps went round to the front of the tent, and then I heard a voice say,

"Hallo, there! Is this Mr. Prince's store?"

"Yes, and my name is Thomas Prince. What do you want? I'm in bed."

"I want to speak to you. I'm a superintendent of police."

"All right. In half a minute I'll unfasten the door."

I could hear Tom Prince, through the thin canvas wall which divided the store into two apartments, striking a light, and cocking his revolver. I could also hear Captain Maconochie performing the latter operation underneath me, and I did not feel very easy in my mind.

"Good evening, Mr. Prince," said the constable, as he entered. "You know me, I believe?"

"Oh, yes! you're Superintendent Ramsay. You must excuse us storekeepers for being so suspicious. What's the matter, Mr. Ramsay

"Well, I've got a party outside—come in, Dick Potter—who does a little work in our line occasionally. He has got information that——"

I could not hear what followed, for the speaker sank his voice to a whisper, but presently Tom Prince said,—

"Bless me! Maconochie! you don't say so!"

"Yes," replied the harsh tones of Dick Potter, "I've certain information that he means to ask you to shelter him to-night. I thought he'd have been here by this time."

Here Captain Maconochie, beneath my bed, muttered audibly, "Are they all turning traitors? I thought, if I could trust any one, I could trust Nat the Weaver."

"Yes," continued Mr. Potter, "I thought the captain would have been here before this. You're sure nobody has come in, Mr. Prince?"

"Nobody. My store has never been left a moment unguarded."

"Shall we question the boy?" asked the constable.

"I wouldn't disturb him," answered Prince, "I dare say he is fast asleep by this time."

"Now, I'll tell you what we'd better do, Mr. Ramsay," said Dick Potter. "It won't do for you to be seen about here, or you'll frighten the captain away. You go down to the bark hut, at the other end of the gully, and stop there with your mates till I call you. As soon as ever the captain comes, Tom Prince shall slip out and give you the office. I s'pose you'd rather take him alive than dead?"

"Oh! alive, certainly," answered the superintendent. "And where are you going to stay, Dick Potter?"

"Under the shadow of that big white-gum tree yonder. The moon now is high. It's as light as day. If anything, as big as a bandicoot, offers to enter the tent-door I shall see it."

After a little further conversation, the constable and Dick Potter took their departure. More than half an hour now elapsed, to me a half-hour of the most painful suspense. At the end of that time, Captain Maconochie, who had hitherto remained perfectly quiescent, pulled my bedclothes significantly. I sat up in bed, and bent my head down to hear what he had to say.

"I hear your friend Tom Prince snoring," he whispered. "Creep quietly out of bed, and see if he is asleep."

In obedience to his command I got out of bed, pushed aside the partition, and peeped in. As the front of the tent was open, the moonlight was streaming in, and I could see everything distinctly. Tom

Prince, wearied by his fatiguing walk, had fallen fast asleep on his bunk.

As soon as I had told the captain what I had seen, he emerged from beneath my bed, and cautiously glided into the front apartment of the tent, taking care to keep himself in the shadow. He took up the revolver which had fallen from Tom Prince's hand, and retreated again. For a moment I feared that he was going to murder the storekeeper, but he merely struck a match, and lighted a candle.

"I take away his pistol," he whispered, "to prevent accidents. Now then, can you find me a piece of stout cord?

My fear returned at these words.

"Are you going to kill him, Captain Maconochie?" I asked, breathlessly.

"Kill him? Nonsense! Why should I kill Tom Prince? I don't mean to lay a finger on him."

"But the other one?" I said, pointing in the direction of the gum-tree.

"You mean Dick Potter?"

"Yes."

"I am going to give him a lesson. Quick, hand me the cord."

I still hesitated. "You won't murder him, poor wretch?"

Captain Maconochie grasped my arm. "My young friend," he said sternly, "you must not interfere with my business arrangements." He paused, and drew a glittering bowie-knife from a sheath which hung beneath his serge shirt. "Give me the cord, I don't mean to kill Potter, though the reptile deserves it—I am going to take a leaf out of the little Mexican's book."

At this point I gave him a piece of cord.

"Now mind," he said, drawing the bowie-knife, "you must not stir from this spot, or wake Tom Prince, or utter a signal of any kind for half an hour. Disobey my orders at your peril. Tell Prince I'm sorry to damage his property. Good-bye."

With these parting words, he cut a great gash in the canvas wall at the back of the tent, and leapt as nimbly through the aperture as Harlequin at a Christmas pantomime. For five minutes or more I stood listening breathlessly; but when I heard a faint stifled cry, I could keep silence no longer. I rushed into the front tent, and shook Tom Prince violently.

"Hollo, boy," he exclaimed, sleepily, "what's the matter?"

I hurriedly told him the news, and said that I feared Dick Potter had been murdered.

"Where's my revolver?"

"Maconochie has carried it off. Stay, no, here it is in this corner."

Tom Prince peered cautiously out from the tent door. As I had disobeyed the bushranger's injunctions, and might reasonably expect, if he saw me, to receive a bullet through my heart, we decided that it was better to wait where we were until daylight.

Just as the dawn was breaking, Superintendent Ramsay, accompanied by two of his men, made his appearance.

"Where's that scoundrel Potter, I wonder?" I heard him say; "I expect he has gammoned us. Hey! Mr. Prince, are you up? Any news of Maconochie?"

Tom Prince and I told the strange story of Captain Maconochie's concealment and escape, showing the constables the gash at the back of the tent.

They listened with great attention, cross-examined me sharply, but finally seemed satisfied.

"I expect he has killed Potter," said one of the constables. "Let's go and look at the spot where we left him standing."

We all went to the white gum-tree. The constables examined the ground, and peered into every blade of grass. No blood was visible, and there were no marks of a struggle to be seen, but then the ground was hard with continuous drought.

"Perhaps the two scoundrels have bilked us, and gone off sociably together," said Superintendent Ramsay. "Anyhow, I don't believe Potter is dead. He is just the sort of man who is bound to live until he graces the gallows."

For more than two hours we searched the bush without avail. At the end of that time whom should we meet coming across the ranges but Sam Skilbeck.

"Hallo! Sam," said Tom Prince, "you're returning from your work, instead of going to it. Lost Banbury again?"

"No," returned Mr. Skilbeck, "I was coming back to look for help. As I was a going along across that little gully they calls Tin Pot, I hears a sort of a faint whine. Hollo! says I, that can't be a 'more pork' at this time of the morning; it sounds human. So I cooeys, and somebody cooeys back again. Accordingly I works my way to the spot, and there I finds a poor unfortunate devil at the bottom of an eighteen-foot hole. It was too dark to see much of him, but he seems either drunk or cranky, for he says somebody tied his arms and legs and pitched him in."

We procured ropes and, under Sam Skilbeck's guidance, proceeded

to Tin Pot Gully, where, as we expected, we found Mr. Richard Potter.

It took some time to rescue him, for he was badly bruised and cramped in his limbs, but no bones were broken.

"If he had been a decent hard-working fellow," said Mr. Skilbeck, "with seven small children, he'd have broken his neck to a certainty."

As soon as a glass of spirits had been poured down the renegade bushranger's throat, he told his story with singular self-possession.

"Really, gentlemen, I'm the most unlucky cove that ever lived. Twice within two or three months have I been within an ace of strangling. I was all alive-oh! with my back against the white gum, watching Prince's tent, as a cat watches a mouse-hole. All of a sudden I heard a stealthy step behind me. Of course I thought it was one of you gentlemen come to make sure I was doing my duty. Instead of which, before I had time to look round, a slip-knot was chucked over my head and I lost my senses. When I came to myself there was a handkerchief stuffed into my mouth, my arms and legs were pinioned, and I was being carried like a sack of potatoes on somebody's back. 'Who are you?' I said: 'Maconochie,' was the answer; 'Are you going to murder me?' 'No, I shan't murder you,' he replied, 'but I'm going to drop you down the deepest shaft I can find, and you may thank your stars, traitor Dick, that the Bendigo sinkings are generally shallow.' And, as you see, gentlemen, the beggar kept his word. You don't know what I've gone through all these blessed hours. Cramps and bruises are nothing; death by slow starvation was what I expected. I've said every line out of the Prayer-book I could think of. I must give up the thief-catching business, gentlemen, I really must; it doesn't suit my health."

"What, and take to thieving again?" observed Superintendent Ramsay, with a grin.

"No, I mean to be a square cove* for the future, honour bright. As soon as I get the use of my limbs, I'll take the marrowbone stage for the Murrumbidgee River, and get a hut-keeper's berth."

My mates were much astonished to hear of my exciting adventures. Prawle declared that I had not behaved exactly as a law-abiding citizen should behave. "I can see," he said, "that Stephen regarded Maconochie in the light of an ill-used hero of romance. He treated him as he might have treated a refugee royalist—one of those picturesque fellows you read about in Scott's novels. If I'd been in your place, I should have flown at his throat, as Muzzler flew at Sam Skilbeck."

* Honest man.

"No, indeed, Prawle, you wouldn't. And you forget that I'm not so big as you."

"All things considered, I think Stephen behaved very pluckily," said Jemmy.

"Yes; but he gave his sympathies to the cause of lawlessness," rejoined Prawle. "Now that I have become a capitalist, you can't conceive the repugnance I feel towards persons who prey on the property of others. Come, let us take down the tent, and get ready for starting."

I should have felt offended if Prawle had really meant what he said, but there was a comic twinkle in his eye all the time that he was speaking, so that I was not deceived by the solemnity of his voice.

We purposed leaving our tent and tools with Tom Prince, as we meant to return to the diggings after a short holiday. We had no intention of encumbering ourselves with a tent on the road to town; indeed, as we had planned to travel by night and to sleep by day we scarcely needed blankets.

An important question now arose. How should we carry our gold? We could not distribute it in equal portions among the party, because the greater part of it consisted of one nugget, and it seemed almost impossible to conceal such a big nugget so that, if we were searched by bushrangers, it would escape observation. When I speak of a big nugget, you must not imagine anything of a very unwieldy size. Eighteen pounds weight of gold packs into a small space. Our nugget was about as big as the shank-bone of a leg of mutton. Tom Prince gave us some excellent advice on this point.

"Since I've been a storekeeper," he said, "I've been obliged to carry about a good deal of gold, and I've resorted to all sorts of dodges for concealing it. I shan't tell you what they were, because the closer such secrets are kept the better; but I can give you a hint about your big nugget. I don't want to frighten you, lads, but I can't help telling you that there is a rumour going about that the sixteen-year-olds—so they call you—have made their fortunes, and you may depend on it that a scoundrel like that Potter keeps his eyes and ears open to all sorts of gossip. Have you baked any dampers yet as provision for the journey?"

"We thought of buying bread on the road," answered Prawle.

"I wouldn't, if I were you. Take your stores with you, and avoid the main road altogether. Now supposing you put your nuggets into some of your dough, and bake a separate cake for show and not for use, won't that deceive the bushrangers?"

"It sounds a capital plan," said Jemmy.

"It'll make the dough dreadfully heavy," observed I. "Fancy an eighteen pound nugget inside a loaf!"

"If it makes the dough heavy," answered Prawle, gravely, "you must add some German yeast."

"Prawle's remedy," said I, "reminds me of the story of the man and his wife on a very stormy night. 'My dear! my dear!' she cried, trying to awake him in her alarm, 'don't you hear the wind?' 'Put a peppermint lozenge outside the window,' he answered, lazily, 'it's an excellent thing for the wind.'"

"But remember one thing," replied Tom Prince, "don't hide away all your gold. Disappointed bushrangers are apt to treat people very cruelly. Last winter a carrier was travelling towards Ballarat; his dray got bogged near Mount Buninyong, so he went some distance into the bush to procure spars for the purpose of prizing his wheels out of the mud. He heard a low moaning sound, and found a man tied to a tree, almost dead with hunger and weariness. He had been there three days, and the cords had cut into his wrists and ancles. Had it been summer time he would have been eaten alive by insects. By degrees he recovered, and told his story. He had hidden his gold under a false sole in his boots—he was a shoemaker by trade—and obstinately refused to disclose his secret, never believing that the villains would dare to treat him as they did. Now you young men are rich, you can afford to keep six or seven ounces of gold in your pockets, and, if you are bailed up, they will take that and let you go."

"Do you advise us to carry firearms?" I asked.

"No," answered Tom Prince. "In a tent firearms are of some use. Fellows think twice about attacking a place when they know there is an armed man inside; but on the road it's altogether different. You can't point your pistol at the head of every man you meet, and hold it there, can you?"

"Scarcely," said Jemmy.

"Very well. Then, supposing you pick up a stranger or two as you travel along. You tell each other the news, and so on, when suddenly he claps a pistol to your head, and bids you hold your hands up. If you dare move your hands towards your holster you are a dead man. In a small party of two or three persons firearms actually do mischief, because they lead rogues to suppose that you are carrying something which is worth fighting for."

The distance from Bendigo to Melbourne is about 110 miles, and we hoped to accomplish the journey in four or five days by walking perseveringly during the night and the cool hours of the day. I have heard

of men doing the whole distance in two days; but then they were skilled pedestrians, we were only youngsters, and our time was not particularly valuable. We were sorry to bid good-bye to Tom Prince, but still more sorry to part with Mr. Skilbeck, because, as he was going to Mount Morang, we did not know when we should see him again. But he delighted us by saying that he would go with us as far as the Carambong Creek.

"The old lady," he said, meaning thereby his young and blooming wife, "is bent on seeing me again before I goes off with this new rush: so I can't deny her. In fact, I shouldn't be surprised if she comes round me, and either keeps me at the anvil at Carambong, or insists on going to Mount Morang. A female," observed Mr. Skilbeck, "can twist me round her little finger."

"Are you going to ride Banbury?"

"No; my mates can't spare Banbury; he's busy carting wash-dirt."

The sun was within an hour of setting, and a beautifully cool breeze had sprung up when we started on our journey. As we passed the Bendigo police encampment, we saw Mr. Richard Potter mounted on horseback, looking wonderfully brisk for a man who had passed the previous night bound hand and foot in a mining-shaft. He saluted us cordially.

"Going up to town for the Christmas holidays—eh, mates?" he cried. "I wish you joy. I'm off to the Murrumbidgee to-morrow, to look for a job as hutkeeper, worse luck!"

"I don't fancy that feller," observed Mr. Skilbeck, when we were out of hearing. "If he was going hutkeeping, he wouldn't be mounted on a trooper's horse. In my opinion he runs with the hare and keeps with the hounds—half thief and half thief-catcher—you understand me? Did you take notice how Muzzler growled at him?"

We made a prosperous journey as far as the Carambong Creek, without meeting with a single adventure. We were hospitably received by Mrs. Skilbeck, who killed a couple of young cocks and made a pumpkin-pie for our especial entertainment. We had not tasted such a luxurious dinner for months, and we presented her with a handsome nugget, to be worn as a brooch, in acknowledgment of her kindness. She laughed at the big damper, which Prawle carried strapped on his roll of blankets. "No fear of starving," she said, "whilst that remains."

Prawle replied that we meant to carry it to town, to show the Melbourne folks how we lived on the diggings. At last came the time of parting. We shook hands warmly with Mr. and Mrs. Skilbeck, and even Muzzler gave us a paw all round.

At length we arrived within ten miles of Auriferopolis, as I once heard a schoolmaster call Melbourne. We were quite weary with crossing the naked plains of Keilor; and when we reached a belt of trees, under which there was a waterhole, we all agreed to camp and take supper. It was two in the morning, the sky was cloudless, and a brilliant full moon made everything almost as light as day. We lighted a small fire, and enjoyed a very comfortable repast. Nobody felt inclined to stir after supper: Prawle smoked a pipe, while Jemmy and I rolled ourselves up in our blankets.

"Hallo!" whispered Prawle presently—"Look there!"

Jemmy and I raised our heads, and saw in the extensive plain before us, which shone in the moonlight like a sheet of frosted silver, the figures of two horsemen. They were not more than a hundred yards from us. A moment afterwards one of them uttered a peculiarly shrill whistle. They were then joined by three other horsemen, who rode out of the wooded region which skirted the plain. The five next drew their horses' heads into a circle, apparently consulting together.

"Who are they, Prawle?" I asked—"Constables?"

"I'm afraid not," he answered. "Diana's foresters, more likely."

After holding council together for a few minutes, the horsemen dispersed and rode away. We felt immensely relieved. But our relief only lasted for a few minutes. To our horror we presently saw them converging on us from all quarters of the compass!

Two of the number rode in advance of the others, presenting their revolvers at our heads and bidding us hold up our hands, with dreadful threats of vengeance in case of disobedience.

Suddenly one of them uttered an exclamation of disappointment.

"Why, it's only a parcel of boys!" he exclaimed. "You swore it was Clarkson's lot, Barney."

"Sure it was Clarkson's lot that we saw at the Wombat," answered Barney. "Didn't they gev us the slip by starting off before daylight?"

We understood what these ruffians were talking of. Clarkson and his mates were reckoned the luckiest diggers on Bendigo. During the last few weeks they had obtained upwards of five thousand pounds' worth of gold.

"Boys or men," cried another of the robbers with an oath, "they must have something worth taking." He dismounted from his horse, and swaggering up to us, roared out, "Turn out your pockets."

"And hand over your blankets and hats," said Barney's companion. "If you try to keep anything back, we'll strip you and flog you with a bullock-whip."

As I recognised in Barney Callaghan a member of the Maconochie gang, I ventured to hand him the safe-conduct which I had received from his captain.

"Hwhat's this?" he shouted roughly. "This ain't a bank flimsy. Here, Ned, you're a scholar—read this."

Ned read it aloud. It was received with shouts of brutal laughter.

"Captain Maconochie be jiggered!" exclaimed the Irishman. "This is a free country. I'll call no man master as long as I'm outside of Wintle's Hotel.* Ned, lend us a lucifer. I'll light my pipe with Mac's note of hand."

He suited the action to the word. As Prawle afterwards remarked, it was unkind of him to destroy the pass, for even if it had no practical value, it would have been highly prized by collectors of autographic curiosities.

By this time we three unfortunates had emptied our pockets, had unrolled our blankets, and had handed over to our oppressors all the gold which we had not "planted" in our precious damper. Prawle, as the biggest and strongest of the company, delivered over three ounces, while Jemmy and I were content to surrender about two ounces each.

"Is this all?" growled Ned.

"You can search us again if you don't believe us," said Jemmy.

They had searched us pretty well already—they had plunged their hands into our pockets, they had felt us all over, they had rummaged in our blankets and our pannikins, they had torn out the lining of our hats.

Prawle did something which Jemmy and I thought decidedly too rash. With a countenance expressive of the utmost humility, he handed over to Barney the Irishman the Damper—the precious damper which contained our joint fortunes.

"Curse your bread!" he answered; "I don't want it." He gave it a kick with his foot. It broke into two or three pieces, but most fortunately they rolled beneath a log of wood, and lay in a deep shadow.

"Now, then, pack up your traps and be off," said Ned. "Dare to say a word to the police, and we'll shoot every one of you." With these words he remounted his horse.

You may conceive with what apparent carelessness and real anxiety we picked up the fragments of the broken damper, and thrust them into our pockets. A corner of the great nugget was actually laid bare, glittering and yellow, at the point of fracture!

* The Melbourne Gaol, at that time under the control of Mr. Wintle, was so styled in slang phraseology.

We packed up in such a state of agitation, that we left several things on the ground behind us—a pannikin, for instance, and a tomahawk. But having secured the chief part of our property, we cared little about the rest. Till we got into the streets of Melbourne, which we did not care to enter till day was breaking, we scarcely spoke a word. We went to Mrs. Clutterbuck's boarding-house, but found every corner of the house engaged. Shoals of immigrants were pouring in, and the town was full of diggers, holiday-making. Ten o'clock found us at the doors of the Bank of Australasia. We were the first customers there. The clerks were accustomed, in those days, to strange doings, but even they were amused to see us gravely breaking a great loaf of unleavened bread to pieces, and picking out its golden plums. We were as pleased as Lucky Hans in the old German story, to get rid of those worrying lumps of gold.

We had been so accustomed to greater troubles, that we thought it but a small annoyance when we went to Messrs. Pickford's Baggage Warehouse, and found that an extensive burglary had been perpetrated there during our absence, that our boxes had been broken open, and that all our best clothes and other valuables had disappeared. The proprietor showed us a heap of coats lying higgledy-piggledy on the dirty floor, and invited us to fit ourselves from them ; but, as we were rich, we preferred going to a reach-me-down store, as Prawle styled it, where a Jewish gentleman rigged us out in the latest slop fashions. Late in the evening of that day, at a suburban village called Brighton, on the borders of Hobson's Bay, we managed to get lodgings. We actually obtained a little room with three beds in it, all to ourselves, for thirty shillings a week.

I must tell the rest of my adventures very briefly. We had encountered plenty of hot winds in the bush, but we had never witnessed a genuine Melbourne dust-storm. The air was as dark and thick as it is during a November fog in London. We literally lost Prawle on Prince's Bridge, though he was close to us, and had to "cooey" for him. The floors of the houses were strewed a quarter of an inch deep with fine sand, and the heat was intolerable. Then I might tell you how we went out duck-shooting in the swamps near Melbourne, and killed nothing but a crane ; how we found a solitary settler there who refused to trouble his head about gold-digging, and sold us delicious water-melons for sixpence each ; how we went oyster-fishing in the bay, and how, on Christmas Day, we had a delightful bathe. Sharks were said to abound, but we saw none. We shouted with pleasure on finding ourselves in the bracing sea-water, and chased each other like so many

dolphins. Then we went to the Post-office for our letters. My people were all well, but my father was sorely pressed for want of money; so I sent him all my winnings, except fifty pounds. Jemmy did the same for his widowed mother. And how did Prawle act? Listen to his parental letter; it began quite savagely:—

"How dare you run away, sir, from your duty? If I were not past sixty, sir, I would fetch you back, and rope's-end you."

But it wound up to quite a different tune:—

"P.S.—My dear Jack, I have just found out that M'Gaffney is a scoundrel. Maybe you did well to leave him. If you succeed at the diggings, send some gold to your poor old father,

"PETER PRAWLE."

"What shall you do, Prawle?" we asked.

"Send the old Turk a hundred pounds."

Soon after we returned to the diggings, but our luck had deserted us, and we got very little gold. My mother was delighted to hear of my success, but both she and Mrs. Wallington implored their sons to come home: so Jemmy and I set sail together, and reached old England safely. Prawle stayed behind.

Years have passed away. Clara Ainslie has become Clara Scudamore; we have three children; and if you were to see me hurrying up Chancery Lane in my wig and gown, you would scarcely believe I had ever been a gold-digger. As for my companions, Captain Spanswick got a berth in the mounted police, Señor Robinson returned to Mexico, Tom Harvey is a clerk in a Yorkshire woollen factory, Mr. Skilbeck has a flourishing farm near Ballarat. And what of Prawle? Why, only last week I got a letter announcing his marriage, and enclosing his business card: "JOHN PRAWLE & CO., AUCTIONEERS AND LAND AGENTS, Scudamore Street, New Greenwich." The dear old boy persuaded the Government surveyors to name the street out of affection for me! And so farewell.

Essay on Football.

WE cannot shut our eyes to the fact that of late years all athletic sports and games have engrossed more attention than they did formerly; yet whether they have had the desired effect of improving the mental as well as the physical faculties is as yet not satisfactorily known, though many learned men have given and still give the subject their earnest consideration.

The game of Football has been one of those whose increase has been very rapid. Not long since it was thought, and indeed known, very little of except as an extremely rough and boisterous amusement, merely fit for rustics to indulge in; but at last our public schools began to take it up, and then, imitating their example, the game was played by smaller ones, until at last we find football beginning to vie with cricket for the laurels of the best English game, which the latter has hitherto held, and undoubtedly will continue to hold for many years to come, in spite of the grasps that football may make to deprive her of them.

When autumn has passed, and winter gradually makes his appearance, the merry click of the bat grows less and less frequent, while the cricketer feels that the time is drawing near for him to retire from the scene of action; but though he may be despondent, not so the lover of football. "What," thinks he, "is a 'half-volley' to a rattling 'drop-kick,' or a long score to a good 'run in,' with a touch-down behind goal at the end of it? As if there was any comparison between them!" Accordingly, he welcomes the dull thud of the football with unbounded delight, the very sound recalling to his mind some exciting match in which he has borne a part.

It must not be supposed, however, that a cricketer cannot play football. On the contrary, we have known cases where the captain of the "eleven" has not only held a similar position in his football "twenty" or "fifteen," but has fulfilled the same as well as he did when in the "eleven." Again, some one might say, "I thought he was so fond of cricket when the season was in." "True," we reply; "but, knowing that the game cannot possibly be played till next year, he, like a sensible fellow, and as a captain should do, applies himself with zest and earnestness to football, if it be only for the sake of setting a good example to others, and showing that as in summer he was a good cricketer, so in winter he can play and enjoy a game of football with equal heartiness. Besides, to quote a hackneyed yet true saying—"Enough is as good as a feast,"—to however great an extent the cricketer may like his game, we should feel rather inclined to question the probability of his not getting somewhat tired of it, were he to play without cessation the whole year round. It is just that cessation which, allowing football and other games to be attended to during the colder months, enables him to feel the greater relish for his old sport when spring returns."

It would be difficult to find a game more appropriate for the winter than football. In the first place, it is one of those enjoyable outdoor sports which, after a few minutes' play, serve to brace up the nerves, rouse all the latent energies, recruit the whole system, and impart that glow to the complexion which can only be obtained by thoroughly healthy exercise. Another reason why the game is considered so good is that, besides being healthy and invigorating, it serves to bring out a fellow's "pluck" and spirit; for at football it is useless to think of "funking" (to use a slang, though not inappropriate, expression), and he who does so is not only laughed and jeered at by his companions, but is put down as a "muff" for at least the rest of the season; unless, as is sometimes the case, feeling ashamed of himself and emulous to make amends for his previous timidity, he suddenly goes heart and soul into the next match, and, urged on by the thought that if he plays well he may in some measure requite his former disgrace, succeeds, before the end of the day, in making an advantageous "charge" or perhaps a good "run in," and obtains from his captain that which is worth all the trouble of playing for, an approving word or two; for nothing is so encouraging, especially to a young player, as a well-judged compliment on his play.

A really good match is well worth seeing, for the bystanders themselves can hardly help taking an interest in it if the play be first-rate; and, what with the shouting of the boys, they sometimes become as excited as if they were playing themselves.

I will endeavour to convey a faint idea of the above, by describing a match for a challenge cup that I once saw played between two rival "twenties" at a public school; but, before entering into details, it may not be inappropriate to make a few explanatory remarks as regards the players, &c. The reader must know that there was a football challenge cup played for every year, and each boarding-house sent up its "twenty" to compete for it, the winners in each "round" drawing anew, until only two were left in, and between them lay the tug of war. In order, however, that the day boys might not be excluded from a chance of winning, they were divided into two divisions, viz., "red" and "blue," and, as will be seen hereafter, they often brought very strong teams into the field. The conditions were that any "twenty" winning the deciding match three years in succession were entitled to keep the cup,—a feat easier imagined than performed.

In the year in question the various matches had been played as usual, and the "final" was to be contested between the Rev. Mr. Daws's boarding-house "twenty" and that of the "red" day-boys, who were far the heavier and stronger of the two; but the former, though small, were not only possessed of indomitable "pluck" and determination, but had great confidence in each other's play. Not that their opponents were wanting in spirit, but they did not work so well together as the small boys.

The eventful day at length arrived when the match was to be decided. Cheerless and wintry enough it certainly looked, but was nevertheless fraught with great excitement and interest to not a few.

At 2 p.m. the rival parties mustered between the goals, which stood about two hundred yards apart. The ground sloped rather to one side, but, as this slight declivity lay across the play, neither was favoured by it.

Like knights at a tournament, they anxiously awaited the signal to engage, and this interim was seized by each captain as a good opportunity to place his men. While they are thus occupied we will take a last look at them before they commence, when it will be almost impossible to identify any individual in particular, so closely will they be mixed up one with another.

Turning, then, first to the day-boys, who stand talking together in small groups, we shall perceive that, for the most part, they are a well-made set, and fit for the work that they know is cut out for them. To their right is Watson, the captain, who goes from one to an other, giving advice, and telling his fellows what to do. He and Torrence are to keep goal, both being good "kicks" and fast runners; Kay,

Wilson, and Browne he puts as "half-backs"; while Morton and Hodgkinson play forward along the top and bottom ropes, two very important and difficult offices to perform properly. The remaining thirteen were all to "play up,"—which perhaps, in one sense, was the hardest work of all; for, unless they were in good "condition," the continual hard work would soon tire them. I need not give all their names, but suffice it to say that the best were Knoxley, Miller, and Shaw, the last especially, who would now and then succeed in making a very good "run in."

On scanning the "Dawsites" how apparent is the great difference of their size in comparison with that of the day-boys! and, strange to say, this is more easily noticed among the *forward* players (where the weight is generally supposed to lie). With the exception of their captain (Lorn by name), and McLean, the next best, both of whom played back, they had no weighty fellows like Knoxley and Miller, but they made up this defect (if it could be so called) by always playing most admirably together, and no matter how their opponents pressed them back, they always returned to the charge with redoubled energy and courage Lorn had likewise arranged his men. He and Mandy (who, though the smallest on his side, was remarkably active) kept goal, McLean, Evans and Brewster playing as "half-backs," whilst O'Connor and Llewellyn were the "forwards" along the ropes. Amongst those who played up there was not one who failed "that day to do his duty," but if any deserve more praise than others they must be Lorn (me), Hope, and Clare, who set undeniable examples to the rest of their side.

At 2.15 Lorn, having lost the toss, kicked off for the Dawsites, and immediately, as if to urge them on to deeds of greater prowess, loud shouts burst forth from their several partisans. The Dawsites lost no time in following up the ball, which, by a magnificent kick of Lorn's, had been sent some distance in front of them, and they soon became fast and furious. As had been previously expected, the heavy weight of the "reds" bore down the "blacks," still bravely struggling, to their own goal, and the former obtained the first "rouge" or point. Again the ball was kicked off; but this time, owing to the strong wind which blew against him, Lorn failed to send it as far as on the previous occasion: however, this failure allowed his own side to get to it before the day-boys, and, playing well together, the "blacks" drove it up to within ten or fifteen yards of the opposite goal, when it went over the ropes into "touch." Here a number of fellows had collected to watch the fun, for each side now formed a line facing one another, and only leaving sufficient room for the ball to be thrown in between them, when

there immediately ensued a tremendous struggle to drive onwards. "Now then, Dawsites, through with it!" "Well played, day-boys!" &c., &c., shout the excited by-standers as each side tries to do justice to the praises that are being lavishly bestowed on them. How the "blacks" managed to keep their ground is known only to themselves, but they certainly did so, and, what is more, by another magnificent rush, mainly owing to the exertions of Lorn (me), the ball was forced behind the goal of the "reds" amidst the most vociferous cheers from every one present, and the umpires proclaiming that they had only five-and-twenty minutes left added still more to the general excitement.

Watson now kicked off, and, being aided by the wind, which was in favour of the day-boys during the whole afternoon, the ball was carried even beyond the Dawsite "half-backs," but Lorn (me), catching it on the bounds, ran as fast as he could close by the top ropes towards his adversaries' goal. Hodgkinson tries to hold him, but fails, as did several others; and, dodging here and there to elude them, he finally kicks when too hard pressed, and, turning back with the satisfactory feeling that he has turned the fortune of the game in favour of his own side, he exhorts them to follow up and do their best, and right gallantly they try to obtain another point. For about a quarter of an hour no material advantage is gained by either side, the play being mostly in the middle of the ground, until at last, Shaw, who had been watching for a good opportunity, takes the ball as it is "dopping" and makes a gallant rush towards the Dawsite goal. He is held twice, but breaks away each time, and has at last only two or three strides to make, when Briscoe, whom, in his excitement, he has not noticed, suddenly "collars" and throws him over; but, though down, he does not let the ball touch the ground, and, forcing himself on his knees and one hand (whilst the other holds the ball) through the intervening fellows, succeeds in gaining the much-wished-for "touch-down." Cheer after cheer rang out from the day-boy quarter, for they now fancied themselves sure of a goal, so good was Watson at "place-kicks." But that "There's many a slip 'twixt the cup and lip" was exemplified in this case, for in putting the ball on the ground Shaw allowed it to roll, and thereby spoilt Watson's kick; the consequence was that the ball went down to Mandy's corner, who ran with it along the bottom before any of the "reds" could get near him. Being supported by Clare, Hope, and a few others, he managed to pass a few more, for these "blacks" kept all intruders out of the way. Torrence, however, would not be thus treated, but rushed at him at once, and succeeded in wresting the ball from him, at the same moment making for the Dawsites' goal. O'Connor, how-

ever, with great dexterity, managed in turn to get it from him, and, running wide of the majority of day-boys, he succeeded in landing it behind their goal, but at too great a distance, unfortunately, for a "place-kick"; and it was therefore decided to have a "punt-out," which would score two points. This was accordingly done, and the game was again in motion, when the umpires shouted "Time! the day-boys have won by a point;" thus putting an end to the best match that I have ever witnessed, though I fear my feeble pen has not nearly done it the justice it deserved.

There is one great drawback, however, which I am sure all lovers of the game would like to see overcome. It is, that there are so many different ways of playing, thereby rendering matches between the public schools an impossibility; and though from time to time endeavours have been made to fix one code of rules, each one has turned out to be a failure, as every one argues that his own game is superior to that of any one else. Since it is but fair to examine both sides of the question, it must be allowed that football has its disadvantages; for, being a game which requires great violence and extraordinary muscular tension, accidents will happen occasionally in spite of the care that is taken to prevent them. Numerous have been the cases where boys have had to stop, either through some fracture, or bad strain of the sinews. Such mishaps cause parents to feel a natural aversion to the game, and they are often greatly astonished to find that their sons, on their recovery, instead of giving up all thoughts of "that rough, nasty game," recommence with greater energy than before. On the whole, however, it is a fine healthy exercise, and "Long may it flourish!" is the hope of one who has seen it played in the proper manner at a public school.

The Letter of Marque.

By LIEUTENANT C. R. LOW, (*late*) I.N.

CHAPTER V.

I HAD the advantage, while refitting my ship, of having a friend at head-quarters. The superintendent of the Government dockyard I found to be an old shipmate in the navy, and he did all in his power to assist me in procuring spars and gear. Within a month I had the *Red Hawk* "all-a-taunto," and my brave fellows, having got rid of all their superfluous cash, were glad to return to work, and hove up the anchor with a will, as we prepared to set sail to earn more prize-money. There was no thought among them of anything but success, no vision of a French prison disturbed the slumbers of the gallant tars, and yet it was a truly dangerous game we were playing.

So one pleasant morning we bade our friends on shore good-bye, and sailed out of Bombay harbour with a fair "top-gallant" breeze. During the first fortnight we only encountered a few British merchantmen, but as we got more to the southward and westward we expected to fall in with those of the enemy. I was much pleased with the good sailing qualities the *Red Hawk* displayed. I had taken the opportunity, while she was in dock, of having the ship's bottom scraped and cleaned, and was amply repaid by the increase in her speed. When we arrived somewhat near the latitude of Mauritius a bright look-out was kept for Frenchmen. We chased one or two, but were unsuccessful in capturing them. In every instance night intervened, when, taking advantage of the darkness, they adopted the ruse of dropping overboard a barrel with a light attached, and then, extinguishing their own lights, managed to effect their escape. This want of success exasperated the sailors greatly, and I began to be anxious, for I had steered into the very jaws

of the lion, and now found myself cruising about almost within sight of the high peaks of that island. I was prepared to dare a good deal in order to capture a valuable prize, and my former success, when under jury-rig, had emboldened me now; but yet it would not do to be knocking about for any length of time so near the enemy's head-quarters, for the French admiral might any day take it into his head to send out a smart cruiser, and then if I could not run I must fight or surrender. However, "Courage!" I said to myself; "I will only stand 'off and on' the island for a few days more, and then make for Cape Comorin." We sometimes actually ran so close into the land, after dark, that the lights of the town could be clearly distinguished. It was a desperate venture; yet a couple of such prizes as *La Fraternité*, and my fortune would be made, when I could return to my land and "live at home at ease" if I desired it.

One morning a large full-rigged French ship was seen standing in the direction of the *Red Hawk*. On going to the masthead I soon made her out to be a merchantman. We were under easy sail, as usual, and, to prevent exciting her suspicion, kept on our course without setting any more canvas. The Frenchman, unsuspicious of all danger so near her own shores, stood on her course, which would bring her within gunshot of us. We felt confident she must fall into our hands without the consumption of any powder,—a matter I was naturally desirous of avoiding, for the report might draw down upon us a hornet's nest of the enemy's cruisers. Suddenly something excited the suspicion of her skipper, for he clapped his helm "hard down," and "went about"; then, sending aloft a crowd of hands, he made sail on his ship. Fortunately we were between him and the island, so he was unable to run for the land; seeing this, he took the most judicious course at his disposal, and, trusting to his ship's swiftness, boldly stood out to sea in a north-easterly direction.

I followed suit. In a minute our rigging was black with the Jacks, who, like "busy bees," swarmed along the yards, and cast to the winds the fair fields of canvas. As soon as everything that would draw was set, all hands crowded to the weather rail and attentively watched for some indication by which could be conjectured the all-important question—Which craft sails the fastest? No doubt the fugitives were still more anxious, for to them it was a question of freedom or captivity. The rate of progress of the two ships was critically scrutinized, and for nearly an hour it seemed impossible to decide whether we gained or lost ground. Some of the sailors thought we were overhauling her, others as stoutly denied it. So two hours passed. It was now noon, and

yet, if any progress had been made, it had been so little as scarcely to be perceptible; certain it was that unless the *Red Hawk* sped over the ground quicker than this, night would set in, and, after all, we should be robbed of our prize. Our fellows were getting savage, when the breeze began to freshen. As the wind first sighed, and yet louder moaned, through the rigging and cordage, we all plucked up hope, for it was an article of belief on board of us that the "old girl" (meaning the Letter of Marque) "was A 1 in a breeze of wind." Yes! now we were overhauling the Frenchman, and our gallant tars brightened up, and rubbed their horny hands as they looked at each other with glee. First, congratulations were exchanged in a doubtful key, and then, as surmise gave place to certainty, the groups of sailors broke up; the fiddler was loudly called for, and the "loud laugh" betokened anything but the "vacant mind," while the double-shuffle and nautical hornpipe, performed to the tune of "Jack's the lad," denoted the pleasing fact that the typical "toe" of that jovial biped might, with propriety, be described as "light" and "fantastic."

By half-past two o'clock, to speak colloquially—"five bells," to put it in nautical phraseology—the *Red Hawk* had crept up so close to the enemy that the foremost guns were cleared away, with the intention of trying to induce the fugitive to bring to with the persuasive tones of their "loud-mouthed thunder." Now the starboard gun was loaded, and the captain of the piece of ordnance reported the fact to the lieutenant of his battery, who reported it to the captain (that is, your humble servant), who turned round to the helmsman with instructions to "yaw the ship a couple of points."

The helm was put "up," the *Red Hawk* fell off the wind slowly, till I sung out "steady," and then, turning back, gave the word of command to the captain of the gun—"Fire, when the gun bears on her stern port." Round flew the wheel, while No. 1 at the bow gun chimed in merrily with "Ay, ay, sir." Half a minute had passed, when, at a signal from the petty officer, the lighted match was applied to the "vent" of the gun (it was before the time of "detonating tubes" and trigger lines), and "bang" went the eighteen-pounder, and "whiz" went the round shot, plump into the stern gallery of the Frenchman.

"Hurrah!" echoed all over the ship, as the admiring shipmates of Ben Spencer, the captain of the gun, greeted the true aim of the honest fellow. This was evidently the only thing the French skipper wanted to induce him to make up his mind. Taking in his studding-sails, he lowered his royals, hauled up his courses, and rounded to without

another effort to escape. We approached, and then I gave the order to shorten sail and lower a boat. In a few minutes the first cutter was pulling for the ship with the first lieutenant in charge ; now he reached her, sprang up the side "like a bird," and the sight of the British ensign, fluttering up to her mizen peak, quickly assured us of her being our lawful prize, captured by our "sword and spear," or rather, to speak less poetically and more according to fact, by our great guns and small arms.

Cheer upon cheer broke from our decks as the symbol of England's sovereignty on the waters floated proudly over the French tricolour, but suddenly a voice from the masthead was heard calling "Sail ho!" adding, "From the south-westward!" It was the voice of the look-out man only that hailed us, yet somehow it struck an unknown sense of uneasiness into many bold hearts assembled below, and checked the rising elation of all ; and well it might, for, like the writing on the wall of old, it spoke the death-warrant of many brave men.

There was a cessation of the hurrahing, while the sailors sprang up the rigging, or, jumping up the top-gallant forcastle, anxiously tried to ascertain the character of this new-comer on the scene of contention. Not for long was the question of her nationality a matter of doubt. A fair and strong breeze brought her down on the wings of the wind in all the pride of white canvas spreading from her deck to the trucks of her masts, and soon it was whispered about that she looked like a Frenchman. The changes of expression discernible on the faces of the crew of the *Red Hawk* were a study, as the look of triumph and lighted-hearted gaiety faded into the assurance of the stern reality, while the whispered conjecture grew into the deep-toned asseveration. The stranger was a French man-of-war without doubt! What course was I to pursue? I looked at my men, for a terrible responsibility was upon me, and from them I got the answer I expected. There was a lull of voices as the men, crowding the decks, saw me conversing with the two senior lieutenants on board. "Pipe all hands aft, Boatswain," I called out.

The order was promptly obeyed, and soon every soul on board, save those on the sick list, were assembled on the quarter-deck, waiting for me to break the silence reigning around. I stood on the break of the poop above.

"Men," said I, "that ship is a French man-of-war. Shall we fight, or leave the prize and make sail? Mind you, there will be nothing cowardly in our doing so, for she is a bigger ship, and carries, no doubt, heavier metal than we do."

My concluding sentence was drowned in a loud, almost savage, shout of "Fight it out, sir! We'll never run from the Frenchman."

"Enough, men," said I. "Beat to quarters;" and, turning to the gunner, "Mr. Ventpiece, open the magazines."

All now was changed to the bustle of preparation for the impending action. Of course in the navy such an incident as the captain of a cruiser asking his men if they were willing to fight has rarely occurred. Men-of-war's men are bound by the Articles of War to fight whenever their superior officers decide to do so, but it was different on board the *Red Hawk*. Her crew, being privateersmen, were not bound by their agreement to fight, but only to prey upon the enemy's commerce; however, nearly every man on board us had served in the navy and entertained the traditional contempt for Frenchmen in general. At the same time, our prize, which under any circumstances would be dearly earned, must be secured. I soon resolved what course to adopt so as to retain possession of her, and also by doing so not to lose the services of any large number of the prize crew it had been my intention to put on board her. I despatched another party of ten men with instructions to the first lieutenant to secure her astern of the *Red Hawk*: after this was done the whole of the French crew were to be forced down below and the hatches were to be "battened down" fore and aft, while a couple of seamen were to be left at each hatch with loaded firearms and peremptory instructions to slay any one of the prisoners attempting to force his way through the hatches. This was soon done, and the indignant Frenchmen were warned of the fate that would await any man seeking to escape from confinement below. There was little time to be lost, for the stranger was coming down before the wind at a great rate. A hawser was passed over the stern of the *Red Hawk* and secured to the "bitts" on board the merchantman, and the men whose duty it was to remain on board her were directed to cut it in case a signal agreed upon by me were made from the Letter of Marque. All the prize crew but the six hands told off now returned on board my ship, and, before the action commenced, I cast her off, so as to enable me to manœuvre more freely.

There was no particle of braggadocio about my gallant seamen. They all knew how momentous were the issues at stake, and it made the most reckless of them grave: upon the result depended the question of life and death to some, of freedom or captivity to all. Soon the strange ship was within about a couple of cables' length's distance of us, and the action would now speedily commence She turned out to be a vessel of nearly twice our tonnage, and I counted with a feeling somewhat akin

to dismay the number of her gun-ports: out of twelve ports on her starboard side, now nearly abreast of us, protruded as many pieces of ordnance, while we could only show eight on a broadside. I do not mind owning that I regretted the rash resolve at which I had arrived; however, it was now altogether too late for repentance, for I should have forfeited for ever the confidence my men reposed in me had I shirked the approaching duel. "No," I inwardly said, as I nerved myself for the stern work before me; "the die is cast, and there is no retreat without disgrace."

The scene of bustle and preparation the deck of the *Red Hawk* had presented was now succeeded by the most perfect, I might almost say painful, calm. A few minutes were only necessary to convert the tidy cleanly craft into a perfect machine for the slaughter of human beings and destruction of wooden walls.

It was a noble and soul-inspiring sight to see the guns with their black muzzles, so soon to belch forth fire and smoke and death, protruding through the gun-ports, while round each 18-pounder was gathered, in steady discipline and in due order, the knot of men, the gun's crew. It was a fine sight also to see the deck groaning with the weight of round shot, and shell, and canister, and grape, as well as bar shot to cut the enemy's rigging in case it might be required. The powder-boys stood at their stations with their little leather magazines for cartridges in hand. Poor boys! they looked clean now, but soon they would be grimy with the smoke of battle, and perhaps some of their pale childish faces would be flushed a deep scarlet with their hearts' blood.

It was with a genuine feeling of pity I cast my eye upon a little delicate-looking boy who served one of the quarter-deck guns. I had tried to induce him before we left England to remain with his parents, but he had implored me so earnestly to allow him to serve in my ship and fight the French—boys in those exciting times talked of little else—that I was obliged to yield to his entreaties. A young hero he was, and now that the yearning wish of his life was about to be gratified, and he was to take part in a real action, the boy seemed as if inspired with that "rapture of the strife" of which poets write. He now looked up at me, and, catching my eyes fixed on him, smiled with a cheerful, proud expression in his blue eyes and fair face that positively startled me. The youngster was more self-possessed than I was, or, for the matter of that, than any of the stalwart seamen, who were brave as it is possible for any of mortal mould to be, but who yet could not conceal the slight nervousness that must precede the moment when the "cannon's opening roar" dispels to the winds all such womanish tremors, and fills the heart

with the ferocious longings for blood that lie dormant, I presume, in the soul of man as in the lower animals, and that have full play in the licensed saturnalia of blood called battle.

There astern of us lay the prize, and as I turned to look at her—the cause, like another Helen of Troy, of all this coming contention—the scene was suggestive of one often seen in the jungles of India, when a tiger awaits, with his paw on the slain bullock or other carcase, the advance of some equally ferocious lord of the forest, who, sniffing the blood from afar, determines to decide the question of property by wager of battle.

The two ships were now within cannon-shot of each other, when a slight movement of her head as she answered the helm convinced me that she was about to commence the action. I was determined to anticipate her, knowing that often the first broadside decides an engagement.

"Fire!" I roared out, and the word of command was lost in the tumult and shock, as a broadside from us caused the timbers of the little barque to shiver as if about to be rent asunder.

Our salvo was immediately answered by a broadside from the enemy, which came crashing through the bulwarks of the upper deck and whizzing through the rigging, carrying death and destruction around. So commenced the action, while the two ships, firing as rapidly as was possible consistent with good practice, approached each other. Soon the clouds of smoke entirely obscured the hull of the enemy from our sight, but the mastheads, yet visible above, were sufficient for our gunners. I very soon discovered that the Frenchman was trying to cut away our masts and rigging so as to render the ship unmanageable, for hardly had the action commenced when we had the misfortune to lose our foretopmast; a round shot wounded it close to the cap, and it fell overboard immediately afterwards, carrying with it the main-top gallant mast. Our inferiority in weight of metal soon became very striking, and, though nothing could exceed the cool gallantry of my men and the accuracy of their aim, it was fighting against great odds from the beginning, and now that our foretopmast was gone our position at once became critical. Not a thought did our fellows give to this catastrophe beyond a hearty cheer and a broadside, while some of them set to work to bring over from the starboard side one of the guns to supply the place of No. 2 gun on the side facing the enemy, which had been dismounted by a lucky shot, and was therefore, of course, silenced. With dogged obstinacy the *Red Hawk's* men fought on; more desperately than ever they worked at the guns; it was the true bulldog tenacity of Englishmen, that knew not when they were overmatched.

Suddenly a cry was raised, "The enemy are going to board!" and behold, through the dense canopy of smoke overhead we could see the trucks on the tall masts of the enemy, overtopping the royal masts of the little Letter of Marque by many a yard, and could discern through the battle cloud that these trucks were nearing us rapidly, while the thunder of the cannon grew louder. Quickly came the stately ship to the death-struggle, and we had no power, had we the desire, to avoid the fierce grapple which was to decide the day; but my noble sailors had no wish to shun the Frenchman's hug, but received the news of his advance with an enthusiasm almost frantic in its intensity. As the great ship bore down she poured in her iron hail of shot, which tore up the decks and crashed through the bulwarks, dealing fearful wounds with the splinters that flew about the confined space. I called away the starboard division of boarders, and scarcely had the men, with boarding pikes and cutlasses in hand mustered amidships, so as to be in readiness to repel the enemy, whether he boarded us in the bows or abaft over the stern, when the Frenchman struck the *Red Hawk* a terrific blow just about the fore-rigging. In an instant after, a large number of the enemy in a dense crowd jumped down from the lofty sides of their ship, and our decks were at once transformed into the arena of conflict. Ordering all hands to quit their guns, I sprang off the poop, and soon every man on the books of the Letter of Marque was engaged in the most desperate of all fights—a hand-to-hand encounter, that in which individual prowess shines the brightest. It is the most critical test of valour; the best man in a physical point of view comes to the front, and merit may be said to bring its own reward, for your adversary bites the dust should he be your inferior in the use of the cutlass or in strength of arm.

I cannot narrate the incidents of that soul-stirring combat, as my time and attention were fully engaged in "settling a small affair" with a French officer, who evinced during the business in hand no slight efficiency in the use of the small sword, but of whom I was nevertheless able "to give a very good account," if I may be permitted to carry out the business simile. Notwithstanding his intimate knowledge of the mysteries of "carte" and "tierce," I am in a position to apply to him the prizefighter's description of Mr. Dombey in the admirable novel by Charles Dickens—to wit, "he was as stiff a 'un as ever I seed, but I think it lies within the resources of science to double him up with a blow in the waistcoat." It was in that region, otherwise vulgarly called by boys deficient in good breeding the "bread-basket," that I was enabled to give the Frenchman a thrust with my navy regulation

sword that, as I said above, "settled the business" out of hand, to my satisfaction at least.

The old man chuckled while he related this feat of his early days to us boys—his admiring auditory—and proceeded,—

It was soon over. We drove the rascals back, some few into the water, where they swam about like rats, and the greater part into the ship from whence they came, and were preparing to follow them, when by some unfortunate means the French man-of-war parted from us; her sails filled, and she drew ahead clear of us. It was a terrible disappointment, and I subsequently learned that the boatswain, whom I had ordered to lash the ships together the moment she struck us, was killed in the hand-to-hand affair on our decks, and no one else knew of my directions or carried out the operation which would have certainly given her up to us as our prize. As matters unhappily turned out, the enemy sailing ahead of us poured in a raking fire on our decks, which committed great havoc. The issue now was wrapped in uncertainty.

CHAPTER VI.

OUR mainmast had fallen over the side, the foretop-mast and jibboom were already gone, and the *Red Hawk* had become almost totally unmanageable. So matters stood at the present moment. I have stated that before the action commenced, anticipating its severity, I had severed the hawser that bound us to the prize astern. I now made what sail I could on the ship, and trimmed them to the wind, while we opened fire again from the guns. The Frenchman had us, however, pretty nearly at her mercy, for all her spars, except her mizen topmast, were standing. She now sailed round our bows, and took up her position on the other side. We had transported three guns out of the eight on this broadside to replace the same number dismounted or made unmanageable by the enemy's fire, and therefore had now only five 18-pounders to carry on the action, while she had her twelve guns all in good condition. The unequal fight could not last long.

Oh! it drove me almost frantic to think how nearly victory was in our grasp, and how, but for the death of the boatswain, the Frenchman would have been ours, and we could have considered ourselves victors in as honourable and hardly-contested a fight as almost any in the annals of the British navy. I could not bring myself to strike my colours

and surrender, and yet every moment was only prolonging bloodshed to no purpose.

The gallant tars still stuck to their guns, like Britons as they were, and uncomplainingly fought on; but the hissing round shot was making frightful havoc in their ranks, and death was garnering in a rich harvest. The first lieutenant was already killed, and I now saw the second lieutenant mortally wounded by a large splinter of iron from one of the five remaining guns, which just then burst, also killing and wounding at the same time seven of the crew. This catastrophe induced me to think seriously of hauling down the ensign, when a shocking occurrence forced me to adopt a course which, as far as I was individually concerned, I would rather have died a thousand times than have ordered. Next to the gun that had just burst was an 18-pounder, of which the little boy of whom I have before spoken was what is popularly known as "powder-monkey." He had escaped from death by a miracle, and as he hurried past me just then with his empty cartridge-case, for the purpose of having it refilled, I marked how his face looked pale, and he seemed to shudder as he stepped over the mangled remains of one of his late shipmates. He looked up at me on passing, and again smiled. Poor child! this was a fearful initiation into the horrors of battle. I was in no smiling humour, for my mind was filled with balancing the *pros* and *cons* of the painful alternative presented to me. The boy was returning to his gun, running with the leather magazine open in his hand. Suddenly, as I looked at him, a round shot struck him full in the chest, and sent his body, huddled up and mutilated beyond recognition, in a heap at my feet, while the warm blood dashed into my face.

Hardly knowing what I did, for this circumstance shocked me more than anything I had witnessed during this scene of carnage, I leant down over the body, and thought, as I gently raised it, that a smile passed over the pale features: it might have been fancy, though I am sure it was as I have said. He was dead of course in a moment afterwards; and, dropping the body, I ordered a young officer standing near me, who had acted as my flag-lieutenant, to haul the colours down; and then, turning to the men, I called out, "Cease firing." No words I can employ can convey to you the bitter mortification with which I gave the order, acknowledging my defeat by an enemy whom it was the fashion in the navy in those days to consider as a foe specially created by Providence for the British sailor to "thrash" where and when he liked. It was in vain that I took to myself the consolatory thought that we were vanquished by a superior enemy under peculiar circumstances, and that it was chiefly from motives of humanity that I discontinued the

action. It was all to no purpose. Scarce had I issued the fatal orders and watched with anguish our beautiful flag, ragged and torn with round shot, descend from its proud eminence, than I felt I would give the remaining years of my life to be lord once more on my own quarter-deck. But it could not be. As these vain regrets rushed through my brain, like a lava-flood of thought, I became faint, and my mind appeared to wander. The scene of blood and death that the decks presented appeared as if passing away. I felt myself falling, and clutched at the air to save myself. Just then a buzzing noise, as of many voices, sounded in my ears, and I heard a voice say, "Send for the surgeon," and then I knew no more.

I believe I lay some days in a state of high fever—at least, I was subsequently so informed,—and when I awoke I could not recognize my new quarters. At first I was oblivious of the dreadful past, but after a few moments' thought it all returned to me. I was without doubt a prisoner on board the French man-of-war—in one of the officers' cabins I knew, as my eye caught a foreign sword and a picture of the young General Bonaparte, who had astonished Europe by his brilliant conquest of Italy: it was the first of the long series of surprises that culminated in the year 1809, when, as the Emperor Napoleon I., he was declared by the Opposition in the House of Commons to be "invincible on land." I uttered a groan as the memory of the sad termination of the action returned to me, and put my hand to my head, which pained me much. The groan drew the attention of a foreign seaman who was set to watch me, but had fallen asleep, and my hand touched some plasters placed round my head. My attendant—or custodian rather—told me in broken French to keep quiet, and further stated, on my pointing to my head (for I was too weak to speak), that I had been severely wounded by a splinter. Well, I will pass over the dreary interval while I lay sick and wounded, and, what was worse, tortured by vain regrets at my misfortunes.

The ship soon arrived at Port St. Louis, but I was too ill for some time to be moved. When I became convalescent, I was transferred to the prison, part of which was set apart for English prisoners of war. At first my fare was scanty and indifferent; but after I had been there some six weeks, when my health was almost restored, I found myself supplied with little luxuries, which I could see were taken from the table of the commandant or some other high prison official. This surprised me; but at length I divined the source of these unwonted ameliorations of prison fare.

The commandant was a Capitaine de St. Roch, and the said Capitaine

de St. Roch had a very pretty and romantic daughter. Now I dare say you boys, who know and care to hear much more about fighting than love-making, will wonder what connection there is between a pretty girl and a good dinner. It was, then, the Capitaine's pretty daughter that brought me the tit-bits from the table of the stern old governor. I often saw the young lady looking out of a window that overlooked the garden in which I used to "take my walks abroad," under the guidance of a janitor armed with a sword. I took no notice of the young lady at first, for I could not see whether she was pretty or ugly, young or old, and, besides, I did not feel in the humour for love-making; my head ached too much with the ugly wound I had received, and the scar of which I shall carry to my grave; and my heart ached, not with *la grande passion*, but with shame and mortification, for I had learned from the *Government Gazette*, which accidentally fell into my hands while on shore, that the French man-of-war had actually been more severely handled than the *Red Hawk*. No less than six of her guns on one side had been dismounted or disabled; but, having her spars mostly standing, she had sailed round to our starboard side, where we had so few guns left fit for service, and opened fire upon us with the whole of her battery of twelve cannon. Hence our long casualty roll—58 men killed and wounded, out of a crew of 110 all told. The enemy's loss, the greater part of which was sustained in the abortive attempt to board, was no fewer than 72 men *hors de combat*—and you may be sure that the official paper did not overrate it,—"which testified," as the organ in question continued, in its bulletin of the victory, "to the obstinacy of the engagement, and proved that the gallant *capitaine de vaisseau*, M. Montfort, found a foeman worthy of his sword." To return.

I am not naturally shy and ungallant, and when on questioning my gaoler, I guessed from his mysterious words and winks and smiles the source whence came the "toothsome edibles" referred to, I forthwith resolved not to be ungrateful to the fair donor. I was certain she must be fair, though, for aught I had seen of her features, she might be "the veritable pig-faced lady" herself. To cut short a long yarn, I did succeed in making known to the fair creature that I was sensible of her kindness, and by sundry ways gave her to understand that I would be glad to thank her in person. Now the commandant's daughter made a practice of visiting for charitable purposes the sick inmates of the gaol, but the rule rigidly excluded these visits from being extended to the prisoners of war. One day, however, a little slip of paper was thrown out of the grated window at which the fair unknown used to take up a

position whenever I walked in the garden below. I managed, unseen by the sentry placed over me, to pick up and secrete this billet-doux, as I made no doubt it was. I then said I was tired, and, burning with desire to read the contents of the letter, retired to my cell.

It was written by a lady, who signed herself the daughter of the governor of the gaol, and told me of a plan by which we could meet, if I was desirous of making her acquaintance, and reciprocating the love she entertained for me, and which she thought from my manner was mutual. She desired me to feign sickness, and said she had little doubt but that she could manage to arrange to pay me a visit, as the gaoler was amenable to a bribe ; though we must be very cautious, for if her father, M. de St. Roch, who was a stern, cruel parent, discovered the affair, he would send her away, and then all prospect of effecting my release would be at an end. Of course I did as desired, and that day week had the pleasure of seeing, for the first time, the beautiful and amiable daughter of the governor. I will not dilate on her beauty of person, or on the more loveable traits of her tender, womanish nature. Directly I saw her I was hopelessly in love and vowed to win her. She soon consented to accompany me in my escape, which she had planned before our first interview.

The governor—her governor and my governor—had, like many hard-hearted parents in fairy tales and out of them, decreed that his daughter was to marry a French naval officer, who was also a marquis and possessed large landed estates in his native country. This gentleman, curiously enough, was the first lieutenant of the man-of-war that had captured the *Red Hawk ;* and I am bound to say, for the choice of the governor, that he was a brave officer, and an honourable representative of the old French noblesse, though the marquis was, truth to say, very ugly in face, and his figure, being clumsy and ill-shaped, was not consonant with the beau ideal of a romantic young lady like Mdlle. de St. Roch. We had good cause, however, to appreciate his noble qualities, as the reader will soon know. After we had met a few times, the lady's father by some means learned that his daughter visited the sick English officer, and immediately ordered the visits to be discontinued, and so our plans for my escape and our embarkation in some craft proceeding to Europe were frustrated. Fortunately he did not guess the object of her visits to me, but put them down to her well-known solicitude "for all prisoners and captives," and so adopted no ulterior steps, such as her removal from the prison. The friendly gaoler was, however, sent to undertake duties in another part of the prison, and a surly dog of a fellow appointed in his place.

On the following day, owing to my being on the sick list, my dinner was supplied to me from the governor's table. It consisted of curry and rice, a favourite dish of mine; but I had little appetite, for I was thinking of my continued ill-luck, and lamenting the possibility of never more seeing my inamorata. As I listlessly turned over the boiled rice, placed by itself on one side of the plate, I discovered a tiny letter, directed in a well-known hand, hidden at the bottom of the plate. I eagerly opened it, and read the following in French :—

"Do not despair, dearest. There is one channel still left me by which your freedom from this odious prison and escape to Europe can be effected, and that I feel confident will result in your deliverance. The Marquis de la Marche would sacrifice anything but his honour for me. He will aid me in gaining you your freedom, but you must not ask me the price. Of one thing be certain; you will ever possess my heart, though my hand, by a hard fate, be denied you. Courage, then, and trust in your Amélie."

My first impulse on reading this was a hopeful one, but then I thought, What does she mean by talking of the price to be given for the part the marquis was to take in my enlargement? Could it be her hand? Impossible! I would rather stay where I was till my death than gain my freedom on such terms. Taking into account Amélie's great affection for me, I arrived at the conclusion, after much cogitation, that I had put a wrong interpretation on this part of her letter, and determined like a philosopher to see what turn matters would take, though I inwardly resolved not to leave the island without the fair girl who was about to arrange my escape. A few days passed by without anything further transpiring. The gaol surgeon struck me off his list, and I returned to my former fare, and so ended all prospect of receiving any communication from Mademoiselle de St. Roch.

A week had gone by, when one night I was awakened from my sleep by a noise as of some one turning the key in my cell-door. I jumped up, and as I did so the door turned on its hinges. There were three figures; one of them held a dark lantern, and in him I recognized, as the light fell on his face, the former gaoler. One was a lady, and it required but a single glance at her tall, elegant figure to identify the devoted French girl. The third person was a stranger to me, but, from the description I had often heard from the laughing lips of Amélie, I had no difficulty in recognizing the Marquis de la Marche. I sprang forward to embrace my fair deliverer, but she, anticipating the action, stepped back, and said in her pretty broken English, "No! not now, for the

sake of Heaven. Do not say one word, I pray you, but follow us out with all speed."

I turned to the marquis. He it was who during my illness on board the French man-of-war had surrendered to me his cabin, though I had been too ill to see him or thank him in person. We shook hands silently, and then without a word all four of us left the cell. So well had mademoiselle's plan been laid that no hindrance of any sort was encountered during the time occupied by our exit. We passed through a long corridor, then through a door at the end, which was also opened by a key from the bunch in the hands of my late janitor. We then turned to the right, and another door gave us egress into a garden—the governor's private grounds, and through which he always passed in his visits to the prison. This door was his private entrance, by making use of which we avoided the sentries placed at the other doors, and his daughter had secured the duplicate keys her father always kept hung over the head of his bed in his sleeping apartment. The presence of the gaoler was necessary, as on this night he was on duty in that wing of the prison. We now stood under the open sky, and I breathed the pure, fresh air of night with unspeakable delight. I was once more a free man. We crossed over the road, where a coach was in waiting. It was the private carriage of the marquis, and, at a signal from him, we drove off at a rapid pace.

I could not contain my silence any longer, but asked the marquis whither we were being driven. "To the quay," he said, "from whence we will embark for my ship. She has her anchor 'hove in short,' and her canvas loosed, for she sails for France directly we set foot on her deck." "Your dress might draw attention," he added, so I have brought some clothes for you. And, monsieur le capitaine, just slip these things over what you have on. They won't fit you well, I know," he added, with a good-natured laugh. I did as he desired, and will say nothing of the appearance I, a man "rising six feet," presented in the clothes of a gentleman some 5 feet 4 inches in height. He had brought sailors' clothes for the gaoler, and by the time we had finished our toilets the coach had arrived at the quay. We got out, hurried along the whole length, and down a flight of steps at the end. Here we found a man-of-war's boat waiting for us. We all four stepped in, and the French officer gave the order to push off and "give way," and the cutter was soon clearing the water on her course towards a craft which lay with her topsails "sheeted home" about half a mile off. The moon had just risen above the crest of the hills in the far distance, and shed its mild rays in rich luxuriance over the sleeping town and silent

harbour. Now we reached the ship, and I was astonished to recognize in her the old *Red Hawk*. The first lieutenant of the corvette that captured us had been posted to the command of the prize, with the brevet rank of *Capitaine de Vaisseau*, and with instructions to proceed in all haste to France with despatches to the French government praying for naval reinforcements to oppose the victorious British navy in those waters.

I remained up to see the barque get under weigh, and then, when the land was rapidly disappearing astern, and all chance of recapture was at an end, I also went below and soon forgot, in a deep sleep, the stirring incidents of the last few hours.

Amélie explained all to me the next morning, and had it been vouchsafed to me in the prison, at the moment before my release, I should have never left the walls of my dungeon, but would have prepared to rot there, till death or a treaty of peace between the belligerent powers had set me free. To be brief, I had gained my liberty at the price of the hand of my fair deliverer. It seems she had promised the Marquis to become his wife, on their arrival in France, if he would rescue the English officer. The enamoured nobleman eagerly accepted the proposal, and hence my freedom. In conclusion, she said earnestly, and with tears streaming down her face—so pale and worn it was, for she had had no rest all the previous night—that henceforth we could be nothing more to each other than friends, for of course she must keep her word. I was dumbfoundered; all my dreams of happiness were so rudely shattered; I could not upbraid her, for she had not only released me, but sacrificed herself for my welfare. I did not say a word, but, kissing her hand for the last time, withdrew to my own cabin to brood over my unlucky fate.

I will pass over the incidents of that long and, to me, unhappy voyage, and will transport the reader from the waters that lave the shores of Mauritius to the latitude of the Cape de Verde Islands.

The *Red Hawk*, as she was still termed by her victors, was chased by several English men-of-war, but her speed enabled her to escape. At length, one morning, when we were nearing the end of our voyage, the Marquis astonished me by a remarkable proof of the true nobility of his character. I was standing by myself near the wheel, and Mademoiselle de St. Roch was pacing the quarter-deck alone, with her eyes bent down, for she could not trust herself to allow of our eyes meeting; indeed, we never conversed, only confining ourselves to polite inquiries after each other's health on meeting at breakfast in the morning. This day my thoughts were occupied with the anticipated pleasure of being

once more on European soil, and I was cogitating on the difficulties of a scheme my naval friend and I had concocted, by which I was to effect my escape out of France, and embark in a fishing vessel for England. Suddenly the Marquis appeared on deck. His manner was agitated as he walked up to Amélie, said something in a low voice, then advanced to me, and asked me to follow him below into his quarters. Without a word I did as desired. Amélie was also there. He commenced the conversation abruptly, and with strong emotion visible in his countenance, and evident in his quavering voice. He said that he could no longer blind himself to the fact that Amélie and I loved each other, that he would never wed any woman that could not give him her whole undivided affection, and that, as he had come to the resolve, after long and painful meditation, to yield up fully and entirely all claim to her hand, he hereby resigned her to me. Saying this, and before either of us, his listeners, had time to express our amazement, he placed her hand in mine, and said, with earnestness, he hoped that neither of us would seek, from generous motives, of which, from our conduct hitherto he knew we were possessed, to swerve him from a determination that, once taken, was with him unalterable.

What could we say? Well, we thought our only course was to thank him for the nobleness of character he displayed in thus sacrificing his future happiness to make those whom he had benefited so greatly, still further his debtors. We did this with all our hearts; the lady, of course—as ladies do on all occasions when their feelings are touched—cried a little. He then left us together.

A few days after this the *Red Hawk* fell in with a fair wind, which carried her into the Bay of Biscay. Now we soon hoped to be anchored in a French port, and preparations were commenced for making our entry with due *éclat*. But, most unexpectedly, an English brig of war appeared in sight, and gave chase. The Marquis was not long in making up his mind as to the course he would pursue. Like a brave sailor, he resolved to fight. The order was given to all hands to repair to their quarters, and thus once again I found myself going into action on board my old ship; but how differently situated I was! Of course I could not take part in the coming fight against my own countrymen, and so had to repair below with the lady, a rôle much against my liking; for, as a rule, I liked to be where powder could be sniffed, and, agreeable as was the society of the lady in question, we know there are times and seasons for all things, and comforting a frightened woman was not my forte. The action commenced, and, for the life of me, I could not keep myself from continually poking my head above the "coamings" of the hatch, to see how the shots were flying about, and whether the Johnny

Crapauds looked "white about the gills." Soon the fight waxed hotter and hotter, until, by the hurrying about to and fro overhead, and the loud cries of the officers to the crew, I knew that the Englishmen were about to adopt Nelson's well-known advice to his captains: "When you are in doubt, you can't do wrong in laying your enemy aboard." Now there was a mighty crash, as the two ships struck, and were locked in the death struggle. Oh! how my heart throbbed with a wild and almost uncontrollable passion to join my countrymen in the terrible hand-to-hand strife overhead! But then I could not in honour raise a finger against my brave preservers. As I paced up and down the darkened cabin, for the hatches and gratings were secured, I cast my eye upon Amélie, of whom I am ashamed to say I had not ever thought for the last few moments. There she was, on her bended knees, praying with an intense earnestness, while tears flowed in streams down her cheeks from her large eyes, which were raised to heaven. She prayed aloud in this supreme moment, and I caught her accents as she pleaded to the Almighty for her brave and devoted countrymen. In passionate language the young girl asked that they might be successful in the struggle, and supplicated Him to spare the life of the noble-hearted friend who had so unselfishly secured our mutual happiness. Her words, though uttered deep down in the closed hold of the ship, were almost drowned in the horrid sounds of Death's revelry above. It was, without doubt, a hardly contested fight; the battle swayed backwards and forwards, but at length the fighting appeared to set more abaft, and the uproar decreased. I knew from this that the British tars were victorious in one more hard-fought action, and my heart leapt within me with a mad joy; but yet I dared not give vent to my feelings, for there beside me, with her beautiful dishevelled head buried in the cushions of the "state-room," half kneeling, half reclining, but wholly abandoned to her grief, lay the form of Amélie de St. Roch. She knew well also that the battle had gone against her compatriots, and, like a true Frenchwoman, was overcome with pity and passionate sorrow. As I stood looking at her, a noise was heard overhead, then a flood of light fell upon the prostrate figure, and then the person who had removed the gratings from the hatches called out in a light, cheerful voice, not at all like that of a man recently engaged in a mortal duel, "Hallo! any one down there? Show a leg up on deck, d'ye hear?" Following close upon the words of this rather singular injunction, which might have been all very well in "clearing the lower deck for action," but was hardly appropriate where a lady was concerned, appeared a young officer, certainly not more than twenty, dressed in the well-known garb of a lieutenant of the Royal Navy.

He stopped when he saw a lady, and said in excellent French, "Je vous demande pardon, madame; si j'avais su qu'il y avait une dame dans la cabane, je ne serais pas entré sans permission."

Lifting his hat, he was about to retire, when, recognizing in him one of my midshipmen that I had knocked into shape while first lieutenant of the *Blunderbus*, of forty-two guns, I astonished him by calling out, "'Vast heaving there, Honourable John, and salute your superior officer!" He remembered me at once, and we had a fraternization. It was Lieutenant ——, the third son of the Earl of ——, who always went by the name of "Honourable John" among his messmates on board the *Blunderbus*, with whom he was very popular. To conclude.

I was overjoyed of course at getting back my old ship, and, having received the loan of a few hands from H.M.S. *Thunderer*, I navigated her to England, where the owners liberally rewarded the prize crew.

The ship's company of the *Thunderer* received an ample reward for their gallantry from the distribution among them of a quantity of specie captured on board the *Red Hawk*. Of course I took my liberator, the fair Amélie, to England with me; and she soon dried her tears, though we long lamented the death of our unselfish friend, the noble Marquis de la Marche, who fell fighting at the head of his men in a vain attempt to repel boarders—a death becoming a peer of France. "Honourable John" accompanied me to England in the *Red Hawk*, and on his arrival at the Admiralty was rewarded by a commander's commission, for the distinguished gallantry he displayed in heading the boarders that retook the *Red Hawk*. That he also took a prominent part in subsequent operations of a less martial character will be gathered from the fact that he stood by me at the altar, as my "best man," on the occasion of my taking to myself Mademoiselle de St. Roch.

"You knew before, boys," added the narrator, turning to us, his auditors, "that your grandmother was a Frenchwoman; but you have never been informed, I think, of the somewhat remarkable circumstances under which I courted and married her. One word more, and I have done. Don't think I forgot about my brave lads far off in the island of the Mauritius. A peace was soon after temporarily patched up between the English and French governments, and all the old crew of the *Red Hawk* were exchanged and returned home.

And now, boys, all you that have followed my adventures and the cruise of the Letter of Marque with interest, there remains but one word more to say, it is—FAREWELL.

THE END.

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